
Measuring the benefits and yield from foreign tourism

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I Introduction

In an introduction to a book of readings on tourism economics, Clem Tisdell and his co editors identified four major themes which often recur in the literature (Aislabie *et al.*, 1988). One theme deals with theory, especially in relation to tourism and economic development. Another relates to the socio-economic impacts of tourism development. A third theme focuses on the interrelationship between tourism and the environment. The fourth theme concerns the public policy implications arising from the growth in tourism and the need for more research to assist in its formulation. With respect to each of these themes Clem Tisdell has himself made significant contributions over the past two decades.

In this paper each of the above themes will be revisited. The context in which the discussion takes place concerns the yield from international tourism. In the search for a suitable measure of the impact of tourism growth, increased attention is being focussed on the concept of yield. This refers to the net economic gain from tourism and takes account of the benefits and costs of tourism activity. Some valuable work has been undertaken on estimating gross tourism expenditure and the contribution of tourism to particular economies. Tisdell himself has estimated the economic contribution of tourism to several countries including China, the Maldives, Seychelles, Mauritius and Pacific Island States (Aislabie *et al.*, 1988; Sathiendrakumar and Tisdell, 1989; Tisdell, 1993). So far, however, this has fallen well short of providing an accurate estimate of tourism yield. The net benefits of tourism are normally significantly lower than the aggregate expenditure of the tourists because it is necessary to give up real resources, goods and services to provide for these tourists. Further, if the yield of different types of tourists could be determined this would help in identifying the most profitable market segments, thereby informing

This paper is based on a report entitled "The yield from inbound tourism" which the authors prepared for the Australian Department of Tourism and published as an occasional paper (Commonwealth Department of Tourism, 1995). That report, however, made no explicit reference to Tisdell's works. The authors wish to thank the Department of Tourism for permission to use certain of this material in the present paper to highlight the relevance of Clem Tisdell's research for our understanding of the concept of tourism yield.

government policy development, marketing strategies and investment decisions. The purpose of this paper is both to assess the current state of thinking as regards this important issue in tourism economics and to acknowledge the contributions which Tisdell has made to the relevant literature.

The structure of the paper is as follows. First, the concept of yield will be defined and problems of measurement highlighted. Some distortions to the competitive tourism market will then be identified and their influence on tourism yield assessed. The paper will then explore the relationship between yield and tourism expenditure before proceeding to consider whether there are any systematic variations in this relationship for different types of tourists. The paper concludes with a discussion of the best indicator of yield and suggestions for further research.

II The concept of yield: definition and measurement

While it is generally accepted that growth in visitor numbers alone is an inadequate measure of tourism performance, and that a measure of tourism yield would provide a more meaningful indication of the benefits from tourism, the definition of yield has been the subject of considerable debate.

Tourism yield is most simply described as the net benefit accruing to a host country from international visitors; that is, the benefits minus the costs of tourism activity. However, this definition belies the complexity of identifying, at the national level, all the benefits and costs of tourism, each of which has differing patterns of activity and impact.

In the face of this complexity, it is easy to fall back to a definition of yield which equates it with no more than an accounting profit. At the individual firm level, this measure is of critical importance – it is a measure of survival. Governments, however, must endeavour to take a broader perspective by examining the impact of tourism on all facets of society. In this context, the impact of tourist activity should be environmental and social impacts.

Tisdell (1993) provides a list of target variables of possible importance to governments in formulating policy in regard of foreign tourism:

- foreign exchange earnings (gross or net);
- net national economic benefits from foreign tourists as measured by changes in economic surpluses;
- employment generation;
- cultural and sociological impact on the host population;
- conservational or environmental impact (including sustainability);
- promotion of international understanding and co-operation;
- income distribution consequences.

While not employing the term yield as such, Tisdell's various contributions to tourism economics reveal his awareness that meaningful discussion of the

impacts of foreign tourism on a host country must address broader environmental and socio-cultural issues as well as economic issues (Hohl and Tisdell, 1995; Tisdell, 1984).

This broad approach to the concept of tourism yield provides a measure of net national benefit. It encompasses a macro approach to the measurement of yield which includes consideration not only of the level of tourist expenditure and the direct costs of providing tourist services, but other factors such as employment and foreign exchange effects, environmental externalities, cultural awareness impacts, import leakages and the possible effect on society of resources foregone which may have been employed elsewhere (the opportunity cost).

There is a need for governments, as representatives of society as a whole, to consider these factors when determining the optimum allocation of scarce community resources. Clearly, the benefits and costs of providing tourist services extend beyond the cash register. Given the diverse nature of tourism activity, they impinge on many facets of the host country's economic and social development (Tisdell and McKee, 1990).

III Measuring tourism yield

While a comprehensive analysis of the benefits and costs of tourism activity would provide an indication of tourism yield, a fundamental difficulty lies in properly identifying and measuring these effects. Given the recent emergence of tourism as a major economic activity, the research base of the industry is still relatively young. Consequently, there is insufficient information on many of the factors which have an impact on tourism yield and approaches to the measurement of different variables have yet to be properly developed.

Tisdell has distinguished between the world economic benefits generated by foreign tourism to a particular country destination and that country's benefits from foreign tourism (Tisdell, 1993, pp. 178-9).

World economic benefits of foreign tourism to country A equals extra profits or extra producers surplus obtained by country A's suppliers of tourist services and profits or surpluses obtained by foreign producers involved in tourism to country A plus consumers' surplus obtained by foreign visitors to country A plus change (positive or negative) in surpluses obtained by country A tourists or consumers.

Country A's benefits from foreign tourism equal extra profits or producers' surplus obtained by country A's suppliers of tourist services plus change (positive or negative) in surpluses obtained by country A tourists or consumers.

If, as a result of foreign tourism to country A, the price of tourism rises in country A, this reduces the surplus obtained by domestic tourists but raises the profits or surpluses obtained by suppliers of tourism services in country A. The net effect, if country A's tourist attractions are not damaged as a result of the increase in tourist numbers, is for country A's benefits, as measured by the above formula, to increase.

A range of other factors also need to be considered, including an appropriate means of measuring such factors as the environmental, cultural and social impact of tourism. Given the qualitative and relatively subjective nature of many of these factors, they are difficult to measure quantitatively or accurately. (Tisdell, 1984, p. 33).

IV Profit in a competitive market

The tourism industry has many of the characteristics of a competitive market: there are few barriers to entry into the market; it is a truly global market with few unnatural barriers to trade; there is a large number of firms; and prices are set on the basis of market expectations.

In a competitive market such as tourism, there is unlikely to be any difference, in the long term, in the yield from different types of tourists. In a competitive market, resources will be employed at a level which reflects their opportunity cost. That is, they will be employed at a level which provides a sufficient return to investors for the cost of capital. If there are resources which provide above normal profits they are bid up in price and any abnormal profit is dissipated into the cost of capital. This is not to say that individual firms do not make a profit. It simply argues that those profits reflect the cost of providing a service, including the cost of physical and human capital.

It will always be possible to identify situations in which the prices paid for some tourism inputs do not reflect their opportunity cost to the economy because of the presence of market power. This is likely to be a short-run phenomenon. In the long run, ease of entry and exit to the industry will enable new firms to compete away any market power existing firms may have, putting downward pressure on profits.

The most obvious example of market power in the tourism industry has been that derived from the regulation of air services, both domestic and international. Many countries, such as the USA, Canada, New Zealand and Australia have deregulated their domestic aviation. A number of regulated international markets remain, however.

V Distortions to the competitive market

While yield in a purely competitive market will tend towards normal profits in the long term, distortions to a competitive market can result in net gains or losses for particular sectors. The net benefits from tourism are normally significantly less than the aggregate expenditure of the tourists. This is simply because, to provide for these tourists, it is necessary to give up real resources, goods and services, which are valuable. Indeed, in an economy in which there are no distortions, the net benefits from tourism are (approximately) zero, because the goods and services which tourists buy have a cost to the economy equal to the amount that tourists pay for them. To measure the net gains from tourism, it is important to identify where there are distortions and assess how significant they are in influencing tourism yield (Dwyer and Forsyth, 1993).

The possibilities for market distortions or net gains and losses from foreign tourism can be grouped under the following headings.

Externalities

Tourism may create desirable and undesirable externalities which could affect tourism yield. For example, unless carefully managed, tourism growth could result in negative externalities or costs such as increased pressure on fragile environments, erosion of sites, unwelcome socio-cultural effects, road congestion or the crowding out of attractions. It can also have positive externalities or benefits, such as greater awareness of the environment and local culture, conservation of human man-made monuments and wildlife preservation (Tisdell, 1983a, 1987, pp. 15-17).

Underemployed resources

Tourism may draw on resources that are charged for, but which have a cost to the economy which is less than this amount because some are not fully employed. If international tourists are willing to pay more for a resource than the rate at which it is currently valued by the community, this is effectively a net gain to the community. Thus, if tourism lessens unemployment because it increases the demand for labour, there will be a net gain as long as the price of this labour is greater than the cost to the economy of making it available.

Taxes and profits

Some of the goods and services bought by tourists may be priced well above the cost of production, because of taxes levied on them or because above normal profits are being earned on them. If tourism results in increased revenues to the government, it may be possible to reduce the tax burden overall or increase expenditure elsewhere (Tisdell, 1983b). This may result in a net benefit for the economy.

Tourists will have some impacts on local public goods, such as roads, parks and recreation facilities. These may be supplied free to users, and be financed by income taxes. Additional use of them by tourists may add to costs, through congestion and increased costs of maintenance, but tourists may not contribute to the costs of provision. This would constitute a cost imposed by additional tourism. However, local governments worldwide are moving towards covering these costs by requiring tourism developments to contribute to local infrastructure, and tourists will thus be paying indirectly for their use of local public goods.

Foreign exchange effects

International tourists bring foreign exchange which may be of value, not because a country has a current account deficit, but because there may be trade distortions such as tariffs. Increased foreign exchange from tourism has a value above its nominal value because there will be more reliance on an unprotected industry, and less on protected industries. In this case the shadow price of

foreign exchange will differ from the market rate. The shadow market exchange rate will depend on the level of the trade distortions, the relevant supply and demand elasticities and the uses to which revenues are put (Fane, 1991).

Terms of trade effects

When the demand for goods and services in limited supply increases, the prices of those goods and services are bid up. The country is then selling its exports at higher prices and thus improving its terms of trade. While this is not strictly a distortion, it can be an important effect of tourism growth (Tisdell, 1993, p. 183).

A number of these effects are likely to be quite small for countries with well-developed markets. Taxes and profit on most goods and services are not high, tariffs are moderate and declining, and supply elasticities for most tourism products are quite high, thereby limiting the potential for price increases. While externalities can be large or small and the size of employment effects is difficult to quantify, the overall net dollar gain from additional tourism expenditures is likely to be significantly less than the total expenditure (Dwyer and Forsyth, 1993).

VI Tourism expenditure and net benefits

In measuring the yield from foreign tourism, an important question is whether the yield is closely related to the tourist expenditure and whether there are systematic variations in this relationship for different types of tourists.

Tourist expenditure is clearly related to the demand for domestic resources, and it is therefore likely to be related to the net benefits that tourism generates. There are various ways, however, by which this link can be broken, the most obvious being a leakage of tourist expenditure.

A proportion of tourist expenditure in a country will be for imported goods and services, and will not add to the demand for domestic resources. In some cases, tourists buy goods, such as Scotch whisky, which are imported, and the leakage is quite apparent. In addition, however, there are indirect leakages. For example, a tourist may hire a car from a domestic company, but the car may have been imported. Similarly, a tourist may purchase accommodation from a foreign owned hotel and some of its profits may be repatriated. Clearly, there is a difference between total tourist expenditure and the net demand for domestic resources after direct and indirect leakages have been subtracted. Tisdell has indicated that such leakages are high for developing countries, and in general much higher for foreign than domestic tourism (Sathiendrakumar and Tisdell, 1989; Tisdell, 1993; Tisdell and McKee, 1990).

Of course, the benefits from tourist expenditure are more than just the domestic resource demand. Imports are not necessarily sold to tourists at import prices as they are often taxed (such as whisky) and profits may be earned on selling them to tourists. The net benefits to a country therefore depend on both gross and net expenditure.

To investigate matters further, it is necessary to examine how expenditure is related to the various sources of gain or loss to the economy identified above.

Externalities

The relationship between expenditure and the externalities created need not be close, but there is likely to be some positive relationship. Externalities will depend on the length of stay in a destination and the nature of the tourist activities. Externalities are not just generated directly by the tourists, as there are also externalities in production of the goods and services which they consume. It is possible that the externalities created by a luxury resort are greater than those created by more modest accommodation, suggesting a relationship between expenditure and the externalities created.

Some possible associations between tourist development and environmental quality are represented in Figure 1 (Tisdell, 1987).

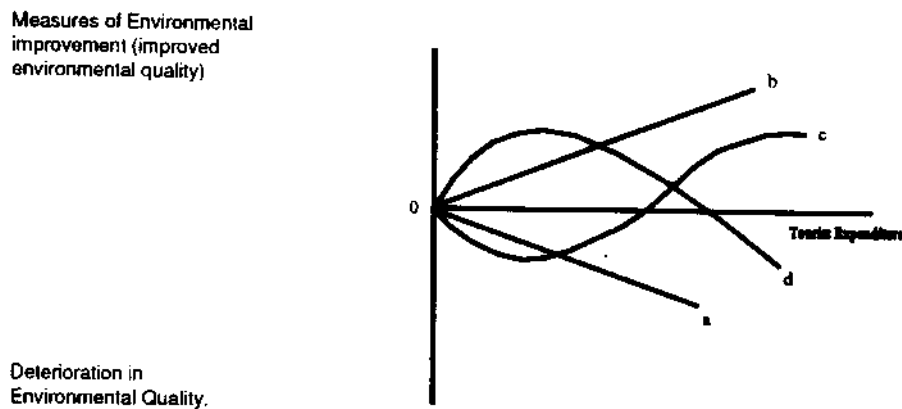


Figure 1.
Some alternative
possible generalized
relationships between
changes in
environmental quality
and tourist expenditure

The curve (a) indicates that environmental quality deteriorates substantially with increased tourism growth. The curve (b) indicates that environmental quality actually improves with tourist development. (In various places Tisdell has emphasized the possible positive impacts which tourism may have on the natural and socio-cultural environments of a host country and that tourism can promote international understanding and co-operation.) The curve (c) indicates that there is some initial deterioration in the quality of the environment with rising tourism, but that this reverses once tourism reaches a given level and, in fact, eventually, sufficient levels of tourism result in an improved environment. Case (d) indicates an improvement in the environment at low levels of tourism but a deterioration of the quality of the environment at high levels of tourism.

Tisdell emphasizes that modelling of this nature might give a false sense of precision, that there is no unique measure of environmental quality, and that different individuals may favour different and conflicting characteristics of the environment (Tisdell, 1987, p. 19). He also reminds us that there are different types of tourists with different types of demand. Furthermore, the same individual may have a demand for different types of tourist experiences on different occasions and at different stages in life (Tisdell, 1987, p. 23).

The creation of externalities depends, moreover, on the policies that are in place to control them. For example, to limit negative environmental externalities, a country may restrict access to environmentally sensitive areas through pricing or other means. It may impose strict guidelines on resort developments or may require new developments to pay for the cost of associated infrastructure. Such policies are among those that may prevent additional tourism from creating significant adverse externalities.

Tisdell has studied extensively the use of economic instruments to protect and improve the environment (Tisdell, 1991). Within the area of tourism economics he has analysed, *inter alia*, how taxes and regulations can affect: the optimal tourist density from an economic viewpoint (Tisdell, 1987, pp. 20-23); the economic losses from marine pollution or related to tourism and policy implications (Tisdell *et al.*, 1992); the impact of pollution and environmental damage on tourism and benefits from pollution control; and the consequences for tourism demand of deterioration of a tourist asset owing to tourist visits (Tisdell, 1991, ch. 10). A constant theme of Tisdell's analysis has been his conviction of the need for sound tourism planning to minimize adverse environmental consequences of tourism growth. He suggests that estimates of the tourism carrying capacity of a region or environment should be incorporated into all tourism and project planning. He envisages this concept to include any social influences which tourism may have on host communities (Tisdell, 1987, pp. 19-20).

Underemployed resources

The link between expenditure and net benefits from underemployed resources is possibly quite strong. An increase in net domestic expenditure increases the demand for resources, employed or otherwise. If it results in a significant demand for underemployed resources, then the gain to the economy is also likely to be significant as the prices which tourists will pay for the goods and services produced by those resources can be expected to be considerably more than the costs to the economy of providing them.

The magnitude of a net increase in employment from increased tourist expenditure will depend on several factors. First, the extent to which unemployed resources within the economy are taken up by the tourism industry. Second, whether resources which may be underemployed in other industry sectors are better utilized in the tourism industry. Third, the degree to which resources are imported from overseas to meet the increased demand for tourism goods and services. Increased visitor expenditure generally increases employment within tourism sector firms, but employed losses may occur elsewhere in the economy, particularly if resources are drawn away from other export-oriented industries. This is true where labour substitution between industries arises owing to a demand for similar sets of skills which are in short supply.

The employment benefit from tourism growth is likely to be significant in an economic environment characterized by high unemployment, the labour-

intensiveness of the tourism industry and the strong relationship between the characteristics of the long-term unemployed and the nature of the tourism labour market. The tourism industry employs many young people and unskilled workers. These groups often feature prominently in the long-term unemployed.

Taxes and profits

When taxes are present, it is likely that the cost to tourists of the goods and services they buy will differ from the cost to the economy of supplying them. If the taxes purely reflect the cost to the community of providing services to the tourist, there is no net benefit. To the extent they also involve revenue raising, however, they reflect net benefits. It could be expected that any net benefit to the economy from such taxes would be related to overall tourist expenditure.

There is scope for governments to increase national gains (and perhaps world gains) from foreign tourists by adopting appropriate taxation policies. It has been demonstrated that the scope for this is limited by relevant elasticities of demand and supply (Tisdell, 1983b). As Tisdell has emphasized, however, the public good and common property characteristics of environmental resources (including cultural resources) make it difficult for nations to extract their full potential gains from foreign tourists (Tisdell, 1984, p. 10). In the actual world, moreover, allowances must be made for differences in the nature of competition, the consequences of transnational companies involved in the tourist industry and international regulations affecting tourism. It is also possible that certain types of taxes which one country may levy on foreign tourists, such as an entry or departure tax, may lead to retaliation by another country. This in turn will impact on the net gains to the first country from foreign tourism, possibly resulting in net losses. Tisdell analysed this situation over a decade ago (Tisdell, 1983b). His discussion of international retaliation in the imposition of tourist taxes introduced international bargaining and game theory considerations into tourism economics which, unfortunately, appear to have been ignored by researchers and government policy makers.

Profits are a more complicated matter. Profits in the tourism industry are very volatile and at any time can be high or negative. As argued earlier, however, most sectors that comprise the tourism industry are fairly competitive and profits will tend to normal levels in the medium to long term. That is, profits in the long term tend to be sufficient to reward investors for the cost of capital and the degree of risk, but no more. It would be a mistake to suggest that any specific segment of the industry is, or is likely to be, inherently more profitable than other segments, or indeed other sectors of the economy operating in a competitive environment. Accordingly, profits earned in any industry operating in a competitive market should not be defined as net benefits to the economy, as they basically represent an adequate return on the cost of its capital. They are not above normal profits and, indeed, there is an opportunity cost in the provision of capital in instances in which it could be utilized to generate comparable or greater profits in other sectors of the economy.

When profits from foreign investments are repatriated, there is not a loss of benefits to the country, as the country is simply paying for the services of capital that it has borrowed. While it is true that such payments represent a leakage, in the sense that they are a payment for an imported service, they are not a loss of a benefit which could have been gained. If profits paid overseas are thought of as a leakage from the economy, then the initial payment for the facility should be thought of as an injection which would not have occurred except for the foreign investment. Over the longer term there is no overall leakage (Dwyer and Forsyth, 1994).

Tisdell has developed several models to analyse the possibilities for the extraction of rent from foreign tourists by a host country (Tisdell, 1983b, 1984, 1993). He has also used these models to illustrate possible conflicts between alternative goals of governments, such as maximizing government revenue, maximizing net national gains and maximizing (gross or net) foreign exchange earnings. He has expressed regret that such trade-off possibilities do not seem to have been considered seriously in tourism policy formulation by governments (Tisdell, 1993, p. 187).

Foreign exchange and terms of trade effects

The foreign exchange effect depends on the extent to which domestic resources are demanded by the foreign buyers. It is therefore directly related to total tourist expenditure less direct and indirect leakages.

Tisdell has noted that the fact that an industry may have a large leakage on imports does not mean that it is a poor earner of foreign exchange. For many developing countries some import leakage will be necessary if the tourism industry is to attract foreign business and attract foreign exchange. From the point of view of maximizing net foreign exchange earnings, he suggests there is an optimal import leakage (falling between zero and unity) and that measures which restrict imports may actually reduce the net foreign exchange earnings of the industry (Tisdell, 1993, p. 178).

The terms of trade effect is also likely to be closely related to net domestic expenditure. When the demand increases for tourism resources in less than perfectly elastic supply (such as land near beaches), the price for those resources is bid up and tourists pay more to take advantage of them. On balance, the host country will gain from selling them at a higher price. The size of this benefit will depend on the elasticity of supply of various goods and services and the price sensitivity of demand. There may be some variations in the impact between different types of tourists and the facilities that they use (Tisdell, 1987, p. 23), but in the absence of specific information on such variations, it would be appropriate to assume a close correlation between net domestic expenditure and the terms of trade effect.

A large influx of foreign tourists can have significant consequences for the distribution of income. Gains from tourism may be unevenly distributed in the economy and domestic consumers and domestic tourists may suffer an economic loss in competition with foreign tourists (Tisdell, 1993, p. 180).

An increase in demand which drives this phenomenon may be due to one of or a combination of a range of non-price factors such as increases in the disposable income of people in the destination country's overseas markets, changes in preferences between domestic and international holidays, or substitution away from other items of discretionary expenditure by households.

VII The yield from different types of tourist

Tourists can be classified in many ways. An important distinction in relation to yield is the length of stay of tourists; they can also be distinguished according to their purpose of visit (business, holiday, visiting relatives) or whether they are low-budget or high-budget travellers. A distinction which has been emphasized more recently is that between so-called endemic and mass tourism. Endemic tourism has been defined as tourism motivated by a desire to see something unique about a country – for example, an interest in the culture or wildlife (Pacific Asia Travel Association, 1992). The following discussion refers to these distinctions in considering the effect they may have on the various net benefits or losses from tourism referred to above.

Different types of tourists clearly have different impacts on externalities, although it is very difficult to consider these impacts systematically. It is possible that endemic tourists could have a greater direct impact on environmental externalities than do mass tourists, because endemic tourists might, for example, want to get closer to environmentally sensitive areas. Their indirect impact, however, might be less, as they might not create a demand for facilities which results in substantial changes to the environment, i.e. changes which might result from a major resort project. In principle, it may be possible to identify which externalities are generated by different types of tourists. Since there are many direct and indirect impacts which are not well documented, however, it would be dangerous to make definitive statements in this area (Forsyth *et al.*, 1995).

As mentioned earlier, any net benefits created by the use of underemployed resources would be likely to be related primarily to the net expenditure of tourists. It is extremely difficult, however, to measure this effect, and it would be even more difficult to distinguish between the effects of different types of tourists. It should be remembered that the total number of people employed by the industry, directly or indirectly, is not a measure of the industry's impact on employment in the economy as a whole. For one thing, the quality of jobs generated must be taken into account (Tisdell, 1993, p. 179). For another, while the increase in tourism demand may, in part, be met by a net increase in domestic output, it will also tend to crowd out other sectors of domestic activity, reducing employment levels in other sectors. The difference between gross employment and net employment effects of tourism growth may be quite substantial (Forsyth and Dwyer, 1994). In the absence of tourism, resources currently utilized by the industry could potentially be reallocated within the economy to create alternative employment opportunities. Accordingly, any

claims that a particular type of tourist has a specific impact on employment must be treated with caution.

In relation to taxes, it is possible that some tourists systematically purchase goods and services (imported and domestically produced) which are subject to higher tax rates more frequently than do other tourists. It is difficult to state, however, which groups are likely to pay higher taxes, other than those that spend more. It may be possible to investigate this issue by examining expenditure patterns and tax rates, but it is not possible, at present, to make any definitive statements about the differential impacts on tax revenue of various types of tourists.

It is highly unlikely that there will be any systematic or predictable differences in the profitability to the host country tourist industry of different types of tourists. Over the long term, the profitability of different tourists will tend to equality, as market forces drive profits towards normal levels. In the short term, some types of facilities may be more profitable than others, but there will not necessarily be more benefit to the economy from attracting tourists who tend to use facilities which are more profitable at a certain time. Indeed, there could be an argument for attracting tourists to under-used (or currently unprofitable) facilities in that, if prices were above the marginal or variable costs of supply, profits would increase with additional demand. It is probably more likely, however, that in such circumstances prices would approximate marginal costs, given the pressure of competition. If so, additional demand would be met at marginal cost and would neither add to, nor subtract from, profits.

Another distinction that could be made would be that between peak and off-peak tourists. If prices were set appropriately, there would be no reason to prefer one type of tourist or the other on yield grounds. It would be necessary for potential tourists to be aware of the costs of visits at different times and it might make good marketing sense to promote off-peak travel at certain times. In general, there would not appear to be any compelling reason to prefer one type of tourist over another on grounds of supposed profitability. There could, however, be significant differences in externalities, especially in relation to congestion effects and impact on the environment, between the two.

There is, therefore, limited basis for distinguishing between tourists, except on the grounds of their net expenditure and their impact on the foreign exchange benefits from tourism. It is the total expenditure which is relevant in measuring foreign exchange benefits, and the pattern of expenditure is immaterial.

Finally, it is possible that there might be differences in the terms of trade effects generated by different types of tourists. This could occur if different tourists used facilities with different supply characteristics. In particular, tourists who used facilities which were in inelastic supply would bid up the price of their use, increasing the rents gained by the (primarily local) owners. It is difficult to say, however, whether the differences are systematic.

Mass tourists might bid up the price of land near beaches, while endemic tourists could bid up the price of access to specific natural attractions. It is an empirical matter as to whether the resource rents generated by different types of tourists differ and, in general, it is not possible to make judgements without further study.

If there were a case where different tourists might generate different terms of trade effects, it would be in instances in which facilities demanded by a particular group of tourists were in short supply. In such circumstances, additional tourism would tend to bid up prices. If supply was relatively elastic, however, this would only be a short-term phenomenon. Further, it would certainly seem peculiar to promote to tourists who would increase demand for facilities that are already in short supply. In the absence of further information, therefore, it would be hazardous to argue that a particular type of tourist would be likely to generate greater terms of trade effects than another.

VIII Conclusions

The outcome of this discussion is that it is not really possible, on the basis of currently available information, to distinguish different yields or net benefits to the nation as a whole from different tourist types beyond their gross and net expenditures, and their length of stay. The best available overall indicator of the yield from foreign tourism appears to be net domestic tourist expenditure (total expenditure less leakages on imports). Since information about direct and indirect leakages of expenditure abroad is unlikely to be available for different types of tourists, it will normally be sufficient to take the gross expenditure as a proxy for yield.

Further analysis may make it possible to distinguish different externality impacts, taxes paid and terms of trade effects, although it is not clear that the differences would be significant. While strong statements are often made that a particular type of tourist has a high or low yield on grounds of environmental impact, profitability or employment, such statements are invariably based on very simplistic or casual analysis.

Accordingly, the best overall indicator of the yield from inbound tourism would seem to be net domestic tourist expenditure (total expenditure less leakages on imports). In the absence of information about leakages abroad, it is normally sufficient to take the gross expenditure.

It is important to recognize, however, that the yield from inbound tourism goes beyond visitor expenditure. Ideally, it should also take account of a wide range of economic, environmental and social costs and benefits of tourism. Further research into these areas may help to enhance our understanding of tourism yield and the impact of tourism growth on different economies. The discussion of yield has also revealed the relevance of Tisdell's contributions to tourism economics, much of which has involved analysis of the gains and losses to a host nation from foreign tourism and the policy implications thereof. His contributions to the theory of tourism development and analysis of tourism's

economic, environmental and socio-cultural impacts provide a valuable foundation for further research.

References and further reading

- Aislabie, C.A., Tisdell, C.A. and Stanton, P.J. (Eds) (1988), *Economics of Tourism: Case Study and Analysis*, Institute of Industrial Economics, University of Newcastle, NSW.
- Commonwealth Department of Tourism (1995), *The Yield from Inbound Tourism*, Occasional Paper No. 3, Australian Government Publishing Service, Canberra.
- Dwyer, L. and Forsyth, P. (1993), "Assessing the benefits and costs of inbound tourism", *Annals of Tourism Research*, Vol. 20 No. 4, pp. 751-68.
- Dwyer, L. and Forsyth, P. (1994), "Foreign tourism investment: motivation and impact", *Annals of Tourism Research*, Vol. 21 No. 3, pp. 512-37.
- Fane, G. (1991), "The social opportunity cost of foreign exchange: a partial defence of Harburger *et al.*", *Economic Board*, Vol. 67, pp. 307-16.
- Forsyth, P. and Dwyer, L. (1994), *Modelling Tourism Jobs: Measuring the Employment Impacts of Inbound Tourism*, Occasional Paper No. 2, Commonwealth Department of Tourism.
- Forsyth, P., Dwyer, L. and Clarke, H. (1995), "Problem in use of economic instruments to reduce adverse environmental impact of tourism", *Tourism Economics*, Vol. 1 No. 3, pp. 265-82.
- Hohl, A.E. and Tisdell, C.A. (1995), "Peripheral tourism: development and management", *Annals of Tourism Research*, Vol. 22 No. 3, pp. 517-34.
- Pacific Asia Travel Association (1992), *Endemic Tourism: A Profitable Industry in a Sustainable Environment*, November, Sydney.
- Sathiendrakumar, R. and Tisdell, C.A. (1988), "Economic importance of tourism for small Indian Ocean and Pacific Island states", in Aislabie, C.A., Tisdell, C.A. and Stanton, P.J. (Eds), *Economics of Tourism: Case Study and Analysis*, Institute of Industrial Economics, University of Newcastle, NSW.
- Sathiendrakumar, R. and Tisdell, C.S. (1989), "Tourism and the economic development of the Maldives", *Annals of Tourism Research*, Vol. 16 No. 2, pp. 254-69.
- Tisdell, C.A. (1983a) "Conserving living resources in Third World countries: economic and social issues", *International Journal of Environmental Studies*, Vol. 22, pp. 11-24.
- Tisdell, C.A. (1983b), "Public finance and the appropriation of gains from international tourists: some theory with ASEAN and Australian illustrations", *Singapore Economic Review*, Vol. 28 No. 1, April, pp. 3-20.
- Tisdell, C.A. (1984), *Tourism, the Environment, International Trade and Public Economics*, Kuala Lumpur and Canberra: ASEAN (Association of South-East Asian Nations)-Australia Joint Research Project No. 6.
- Tisdell, C.A. (1987), "Tourism, the environment and profit", *Economic Analysis & Policy*, Vol. 17 No. 1, March, pp. 13-30.
- Tisdell, C.A. (1991), *Economics of Environmental Conservation*, Elsevier, Amsterdam.
- Tisdell, C.A. (1993), "Foreign tourism: benefits to China and contribution to development", in Tisdell, C., *Economic Development in the Contexts of China: Policy Issues and Analysis*, St Martins Press, London.
- Tisdell, C.A. and McKee, D.L. (1990), "Tourism as an industry for the economic expansion of archipelagoes and small island states", *Massey Journal of Asian & Pacific Business*, Vol. 2, No. 3, pp. 2-6.
- Tisdell, C.A. *et al.* (1992), "Marine pollution and tourism" in Marsh, J.B. (Ed.), *Resources and Environment in Asia's Marine Sector*, ch. 18, Taylor & Francis, New York, NY.