TOURISM, ECONOMIC WELFARE AND EFFICIENT PRICING

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Abstract: A theoretical framework based on economics is provided for assessing tourism's costs and benefits. Suppose that resources utilized by tourists are owned by residents and, as marketed goods or services, are priced efficiently. Then increased tourism promotes net average (i.e., Pareto) economic gains for residents even in the face of such things as increased environmental costs and increased charges. Therefore, under these circumstances, there is no case for entry taxes or qualitative restrictions on tourism to deal with environmental issues. However, such taxes can be justified on rent-seeking grounds that are discussed in this paper.

Keywords: efficient pricing, costs, benefits, environmental costs, entry charges.

INTRODUCTION

There have recently been several papers (Burns and Associates 1989; Forsyth and Dwyer 1990; Tisdell 1987) that consider the implications of tourism for the economic and environmental welfare of a country's residents. Clearly, changes in the demand for recreational and envi-
Ronmental resources by tourists generate costs and benefits for residents. How can the net economic welfare effects of such changes be evaluated? Can residents be made worse-off in net economic terms by an increased flow of tourists?

With two main provisos, the answer to this question is "no." The first one is that in defining welfare, distributional considerations are ignored so that "welfare-improvement" is defined purely in terms of potential Pareto-improvements. This means that social gains are said to arise when the value of gains accruing to individuals in a society exceed the value of any losses imposed. This means that the requisite lump-sum transfers by which gainers compensate losers can be assumed to be potentially possible. The second proviso is that tourists pay for all costs they generate so there are no unpriced externalities associated with the purchase of goods and services by tourists. Therefore, non-marketed goods and services are, at this stage, ruled out. The role of second-best issues stemming from distortions in other markets is also ignored. This last assumption can be more rigorously defended using "third-best" considerations (Ng 1984).

In short, provided tourists pay all the costs they generate, existing residents of a community always benefit in the conventional although restricted economic sense of experiencing a potential Pareto-improvement in their economic welfare from an increased tourist flow. The reason is that without externalities, more tourists mean increased business and trading opportunities for existing firms and more consumption opportunities for resident consumers. These are just the "gains from trade" advantages that are discussed in elementary courses on microeconomics and international economics. Not everyone will necessarily be made better-off as the result of a tourist-induced demand increase but, on average, residents will be.

This can be made clear by considering the case of a "good" demanded by both residents and tourists (e.g., restaurant meals). Then, in as far as tourists purchase goods of this type from freely-contracting residents, the latter are on balance better-off. Although they lose consumer surplus because of the higher prices they pay due to the tourism-augmented demand, they make higher income gains as sellers of the good. This excess of gains over losses takes the form of the net welfare triangle of benefits (Figure 1). The existence of this triangle shows that tourist-induced growth can never be "immiserising" or welfare-reducing (compare Bhagwati and Srinivasan 1983:249-260). This is so even if there exist "distortions" associated with the existence of unexploited monopoly power in the provision of tourism services. Some economists are wary of deriving these strong conclusions using consumer and producer surplus arguments as in Figure 1. It is straightforward, however, to replicate these conclusions in a more conventional trade-theoretic setting using a production possibility curve and indifference curves.

In Figure 2 tourism is measured on the horizontal axis and all other goods are lumped together as a composite good measured along the vertical axis. Then, before an increase in foreign demand for tourism, the production point is on the production possibility curve at P and the level of consumption of residents is at C on the indifference curve.
In this equilibrium, a portion $PE$ of tourism output is sold to foreigners. The revenue from these sales provides finance to buy other goods in amount $EC$ given the initial terms of trade measured by the slope of $CP$. An increase in foreign demand for tourist output tilts the terms of trade line to $C'P'$. Production then shifts to $P'$ in favor of additional tourist output. Most important, the consumption point of residents shift to $C'$, which lies on a higher indifference curve $I_2$ confirming that residents are made better-off by the change. Thus, as argued above, growth in foreign demand for “tourist good” exports does not lead to immiserising growth. This type of growth can occur if there is an outward shift in the production possibility frontier that moves the terms of trade so much in the disfavor of residents that they may become worse-off.

One might object that these net “gains-from-trade” disappear if foreigners own the tourism facilities. The residents lose by paying higher prices for services, and they are uncompensated by a higher income gain as sellers. This argument, however, relies on systematic imperfect foresight in land and capital markets that allows resources to be sold by residents to foreigners at prices that do not fully reflect their potential from tourism. If markets are efficient and expectations of tourism potential by residents are not subject to systematic downward biases, then resident-owners must on balance gain from the free exchange of capital and land assets.
Furthermore, use of the Pareto criterion to evaluate tourism-induced welfare changes can be disputed since it suppresses empirically-important distributional issues. Thus, a key conflict is often seen arising between residents involved in the tourism industry and those not directly involved but who, for example, are keenly interested in a pristine environment. The impracticality of making the requisite lump-sum redistributions then might suggest the analysis is of limited interest.

It is worth making three points. First, even if compensating transfers are not made, indirect benefits from tourism will accrue to those not involved in the tourism industry. These reflect the improved consumption possibilities available to this sector (e.g., increased product ranges) and improved business conditions (e.g., demand spillovers). Second, it is not necessary that the Pareto gains from trade need be realized by these lump-sum transfers anyway. A suitable system of commodity taxes and subsidies, along the lines of the well-known Dixit and Norman (1986) proposal, can effect the same types of compensatory transfers. There are no obstacles to applying the Dixit/Norman analysis
since increased tourism corresponds precisely to an increase in export demands. The "third-best" argument that a "dollar should be treated as a dollar" no matter who gets it (Ng 1984), implies that distributional objectives can be achieved solely through the income tax/transfer system. This would then justify the claim made here of net welfare gains from tourism.

EFFICIENTLY PRICED EXTERNAL COSTS

The proviso that tourists pay all the economic costs they generate can be clarified by considering a situation where both tourists and residents demand some generic resource potentially subject to a congestion externality. In Figure 3 $D_{\text{OLD}}$ and $D_{\text{NEW}}$ illustrate the demand for sunbathing positions on Waikiki Beach (Hawaii, USA) before and after an influx of sunloving Northern European tourists. $AC$ describes the unit congestion costs on the beach at various aggregate levels of sunbathing, while $MC$ is the curve marginal to this that rises at a steeper rate due to the existence of detrimental externalities or congestion costs.

As is evident, if usage of Waikiki is unpriced, the demand increase makes the original sunbathers worse-off since they get less consumers' 

![Figure 3. Demand Shift and Welfare Loss](image)
surplus after the demand shift. As another instance (harder to see but is also true), assume those using the beach pay the full social marginal cost of doing so, both before and after the demand shift. Further, suppose the generated income is distributed to the original sunbathers alone. Then people are better-off, although they face higher beach congestion costs and higher tariffs for using the beach (Clarke and Ng 1991).

The essential idea behind the proof is simple. Without tourists and with no pricing of beach use, the equilibrium demand for sunbathing is \( E_0 \). Here residents are just indifferent between sunbathing, and not because marginal benefits equal average congestion costs. These same marginal benefits are, however, less than marginal costs due to the unpriced "congestion externality." To maximize net social benefits, sunbathing has to be restricted to \( Q_1 \) where marginal benefits and costs are equated. This demand level can be realized by charging a tariff for beach use at rate \( t_1 = E_1A \) that is the difference between marginal and average costs at the usage level \( Q_1 \).

Tourism shifts demand for beach usage from \( D_{OLD} \) to \( D_{NEW} \) and increases the optimal tariff to \( t_2 = E_2B \). The tariff-inclusive price of sunbathing increases from \( P_1 \) to \( P_2 \) and the consumption by residents falls from \( Q_1 \) to \( Q_3 \). Residents are thus made worse-off through the increased tax charges and congestion costs they face by an amount equal to the consumer's surplus they lose. This equals the area \( P_2P_1E_1H \). However, the tax revenue generated by the increased charges rises by \( t_2Q_2 - t_1Q_1 \) that equals the area \( P_2E_2BIE_1P_1 \) less the area \( GIAF \). From the geometry of Figure 3, this equals area \( P_2E_2E_1P_1 \). Therefore, the area \( GIAF \) equals the area \( E_1IBE_2 \) due to the relationship between \( MC \) and \( AC \) (Clarke and Ng 1991). Clearly, the area \( P_2E_2E_1P_1 \) exceeds the consumer's surplus lost to residents by the area of the curvilinear triangle \( HE_2E_1 \). Therefore, efficient resource pricing and redistribution of tariff revenues to residents mean that tourism is welfare-improving for residents, although this group faces higher usage tariffs and higher congestion costs.

This type of reasoning generalizes in an obvious way to any situation where tourists create external costs for residents: price the externality away without discrimination as to type of user, distribute the resulting income to residents and a demand shift will always benefit these residents.

This argument avoids the two obstacles that are customarily raised to this type of pricing and distribution argument: there is no price discrimination between tourists and residents, and there is no need to discriminate between the incomes of residents and tourists when it comes to redistributing externality-generated incomes. These will mainly accrue naturally to residents alone through, for example, an improved provision of public goods. In short, there are fewer problems with the public sector effecting these discriminatory reimbursements than there are in situations where immigrants or guest-workers generate the externalities. Tourists do not qualify for a range of state-provided benefits that permanent new arrivals do. Thus, although this type of efficiency argument was originally designed to analyze issues of optimal population and immigration, it can be readily adapted to
deal with tourism. It is even stronger in this latter setting since it does not rely on intrinsically discriminatory pricing or redistributions between newcomers, visitors, and residents.

Tourism can definitely be immiserising for resident users if the externality is not efficiently priced to close the gap between marginal and average costs and no alternative policy for limiting external costs is carried out. Thus, if use of Waikiki is unpriced, then equilibrium sunbathing usage will shift from $E_0$ to $E_1$ (Figure 3) and original users will enjoy less consumer surplus with no compensating increase in tax revenues. In other words, they will be worse-off unless there are other compensating benefits from tourism that accrue in other sectors of the economy. Therefore, if income benefits from tourism to other sectors are significant enough, they may offset the environmental costs in particular sectors and even enable investment in improved environmental quality.

TAXES AND REGULATORY POLICIES

In an economy where both foreign and resident tourists visit various tourism sites and use hotel/restaurant facilities, it is necessary to account for the fact that individual sites and facilities may possess unique attributes. They provide the rationale for travel, so that the relevant demand curves may have a significant downward-slope with individual owners possessing monopoly power in their utilisation. Moreover, suppose there are high degrees of substitution between differing sites and facilities, so that individual firms are competitive, or at least monopolistically competitive. Then at the market level, there may be the potential to exploit monopoly power by means of government taxes or tariffs.

Therefore, it is important to consider the issue on tourism in settings where marketed facilities are provided by competitive suppliers and marketed facilities are provided by privately-owned monopolies. For simplicity it is supposed that external costs have already been priced away in either type of market structure to focus solely on the rent-extraction issue.

Case of Marketed Competitive Supplies

If an item that generates no external costs is marketed competitively and sold only to residents, then basic welfare economics suggests laissez-faire is optimal so that optimal taxes are zero. If, however, the item is sold only to foreign tourists, then ignoring issues of retaliation, a tax turns out to be optimal and corresponds to what is called, in international economics, an optimal tariff on exports. In this latter situation, the good corresponds essentially to an export, though it is sold and consumed in local markets.

The question of what happens if both residents and foreign tourists demand the item is easy to resolve. Maximizing the aggregate consumer plus producer surpluses accruing to residents can be shown to call for the imposition of a tax being levied on foreign users corresponding to the optimal tariff with residents not being subject to the tax. In
this event, even if there were no differences between the demands of residents and foreign tourists, there would effectively be price discrimination in terms of the tax-inclusive price of the item. If the tax is netted out of the price, then the payment to the supplier is independent of whether the service demander is a foreigner or a resident.

To demonstrate this situation, denote the demands for an item by residents and foreign tourists $Q_R^r$, $Q_F^r$ and the corresponding inverse demands as $D_R^R(Q_R^r) = P_R^r$ and $D_F^R(Q_F^r) = P_F^r$. As noted, reservation prices $P_R^r$ and $P_F^r$ are defined inclusive of taxes required to price away external costs. The variable costs of generating output $Q = Q_R^r + Q_F^r$ are denoted $C(Q)$. For simplicity suppose demand curves are downward-sloping and that costs are strict convex.

The socially optimal pricing and output policies, from the viewpoint of residents alone, should maximize the consumer and producer surpluses accruing to residents. This involves selecting $Q_F^r$, $Q_R^r$ to maximise:

$$W = \int_0^{Q_R^r} D_R^R(Q)dQ + P_F^r Q_F^r - C(Q_R^r + Q_F^r) \quad (1)$$

First-order conditions for a maximum require:

$$\frac{\partial W}{\partial Q_R^r} = P_R^r - C'(Q_R^r + Q_F^r) = 0 \quad (2)$$

$$\frac{\partial W}{\partial Q_F^r} = P_F^r + \frac{\partial D_F^r}{\partial Q_F^r} \cdot Q_F^r - C'(Q_R^r + Q_F^r) = 0. \quad (3)$$

These conditions imply:

$$P_R^r = P_F^r + \frac{\partial D_F^r}{\partial Q_F^r} \cdot Q_F^r \quad (4)$$

i.e.,

$$P_F^r = (1 + t)P_R^r \quad (5)$$

where $t$ is the differential tax imposed on foreign tourists alone given by

$$t = \frac{-1}{1 + \epsilon} > 0 \quad (6)$$

where $\epsilon$ measures the price elasticity of market demand by foreign tourists and $\epsilon < -1$ follows from the standard reasoning that monopoly prices are always set in a price-elastic region of a demand curve. The "price equals marginal costs" condition equation 2 for resident consumers will be realized by free competition, although this equilibrium is influenced by the imposition of the tax. Thus, from (2);
\[
\frac{\partial P^R}{\partial Q^F} = C''(Q^R + Q^F) > 0
\]
given the cost function's convexity. Therefore, a decrease in \(Q^F\) following the restriction in supply to foreign tourists that stems from the imposition of an optimal tax, will decrease price to residents compared to the no tax situation.

Clearly, this tax should ideally be directed to the specific market where the economy has significant monopoly power. This is analogous to congestion taxes on resources subject to congestion externalities. In each case, the tax is best directed toward specific commodities rather than being a poll tax directed toward tourists. Thus, provided such "first-best" policies can be carried out, the rent-extraction concerns here provide no basis for increased departure or entry taxes or for increased visa fees.

It has been persuasively argued (Copeland 1990) that discriminatory rent-seeking taxes are often impractical and that, realistically, different consumers must be charged uniform prices. Even with uniform pricing, however, it can be shown that tourism provides an incentive for introducing commodity taxes. Now suppose it is not possible to price discriminate so \(P = D^r(Q^F) = D^R(Q^R)\) denotes the uniform market price. If the objective is again to maximize Equation (1), then the single first-order condition for a maximum is:

\[
P + \frac{\partial P}{\partial Q^R} \cdot Q^F + P \cdot \frac{\partial Q^F}{\partial Q^R} - C' \left(1 + \frac{\partial Q^F}{\partial Q^R}\right) = 0
\]

(7)

Defining \(\epsilon^r\), \(\epsilon^f\) as the demand elasticities of residents and foreign tourists respectively, Equation (7) can be written:

\[
P = \frac{C'(\epsilon^r \cdot Q^R + \epsilon^f \cdot Q^F)}{\epsilon^r Q^R + \epsilon^f Q^F + Q^F}
\]

(8)

Thus, equilibrium price can be realized as an ad valorem tax \(t\) on marginal cost given by

\[
t = \frac{-1}{(1 + \epsilon^f + \epsilon^r \cdot Q^R/Q^F)},
\]

(9)

which is the appropriate positive optimal tax. When there are no residents \(Q^R \to 0\), the tax reduces to the "optimal tariff" given by Equation (6). When there are no foreign tourists so \(Q^F \to 0\) then \(t = 0\) that again accords with standard optimal tax ideas. Without distortions, domestic wealth maximization implies an optimal set of commodity taxes whenever there exist enough foreign tourists even if price discrimination is ruled out.

It should be further noted that in advocating these types of commodity taxes, the possibility of retaliatory actions against local tourists abroad is ignored. This is really a simplification since the issue of, for
example, optimal hotel taxes needs to be considered in an international setting. The “travel cost” approach to the analysis of tourism (McConnell 1985) suggests that foreseen higher relative costs of travel will act as a disincentive to travel.

Furthermore, the notion that the economy can maximize its joint profit-take from foreign tourists by means of such taxes is not a relevant issue when it comes to ensuring that tourism makes existing residents better-off. As argued earlier, the welfare triangle accruing to residents (Figure 1) means that growth in demand due to foreign tourism can never be immiserising for residents. This is so even if there exist distortions in the sense of unexploited monopoly power in the provision of tourism services. If this power exists, then instituting a set of optimal taxes will maximize the advantage accruing to residents. However without such taxes, a net economic advantage, in the potential Pareto sense, will still be conferred on residents by tourism.

**Case of Marketed Monopoly Suppliers**

If an item is marketed by a monopolist to residents alone, then standard welfare economics suggest that, without “perfect first-degree price discrimination,” the resulting resource allocation will be non-Pareto optimal (i.e., inefficient). Moreover, it is not always straightforward to come up with regulatory pricing policies that will correct this defect and ensure efficient allocations. If the firm is forced to marginal cost price, then it may be forced to realize losses, whereas if the firm is forced to average cost price it may not produce enough (Varian 1990: 407-409).

On the other hand, if the item is supplied only for foreign tourists then the arguments for an “optimal tariff” vanish if the monopolist appropriates the monopoly gains that can be extracted from nonresidents. Some authors consider the case for a policy of reducing competition between suppliers to encourage monopoly pricing of facilities used mainly by foreign tourists (Tisdell 1983).

Regulatory policies where items are supplied both to residents and foreign tourists seem complex to devise. However, it is worth emphasizing that these difficulties need only arise for pre-existing monopoly operations (Demsetz 1968). Formal regulation is unnecessary if governments allow “rivalrous competitors” to bid for the exclusive right to supply various tourism services that are produced, using essential publicly-owned assets as inputs (e.g., land and scenic attractions) over a given “contract period.” Then competition asserts itself through this bidding process and the rents that would otherwise accrue to the monopolist can potentially be redistributed to consumers though inefficiency losses will remain. Thus, monopoly tourism structures need not imply complete monopoly welfare losses.

As still another case, suppose gains may be realized by regulating a monopoly or replacing it with a competitive structure. Even should a monopoly be preserved, it is still the case that its resident-owners and users derive Pareto-gains from an increase in tourism. Thus, the earlier argument does not depend on the existence of a competitive supply function—it generalizes to the case of monopoly structures. Suppose a
The monopolist faces a linear demand $Q = k(a - bp)$ where $a, b, k$ are positive parameters with increases in $k$ reflecting growth in demand due (for example) to tourism. Further, suppose the monopolist’s technology can be summarized by the quadratic cost function $C(Q) = cQ + dQ^2/2$ with $c, d$ parameters. This way, marginal costs increase or decrease as $d > 0, d < 0$. If the monopolist maximizes profit it is straightforward to show that the optimal price/output plan satisfies:

$$P^* = \frac{a/b - (a/b - c)}{(2 + kbd)}$$

$$Q^* = \frac{(a/b - c)(2/kb + d)}{(A1)}$$

Thus, provided $a/b > c$, this must be the case for the monopolist to produce positive output, then increases in $k$ are seen from Equation (A2) to boost $Q^*$ (i.e., demand growth must result in increased output).

The effects of the demand shift on price depend crucially on sign $(d)$, or on whether marginal costs are constant, increasing, or decreasing. With constant marginal costs, $d = 0$ prices is unaffected by demand shifts. Therefore, consumer surplus occurring to the pre-shift population (from now on, “residents”) is not altered. Profits, however, can be shown to rise by $(k - 1)b(a/b - c)^2/4 > 0$ so, if residents own the firm, the demand shift provides an (actual) Pareto improvement in welfare for them.

With decreasing marginal costs, $(d < 0)$, growth in demand decreases price and increases both the consumer surplus accruing to residents and the profits they receive. Again the shift provides an (actual) Pareto improvement in resident welfare. With increasing marginal costs $(d > 0)$, growth in demand increases price and reduces the surplus occurring to resident consumers, while increasing their profit-take as firm owners. It is now shown that the income increase here always dominates the reduction in consumer surplus so that a potential Pareto improvement occurs to residents. Consider Figure 4 where demand shifts from $D$ to $D'$. Note that marginal costs $(MC)$ are increasing. Residents here lost consumer surplus of area $A$ but gain increased profits of $A + B + C$. Thus, a net average gain or potential Pareto improvement occurs.

Always residents derive net average economic gains from tourism though the firm operates as a monopoly. The gain realized may be less than that achievable by breaking-up the monopoly or regulating it. This merely restates the well-known Pareto inferiority of monopoly to competition. However, given that the monopoly is to be preserved, at least a potential Pareto gain does result with the demand shift. The analysis here can be interpreted as providing a local approximation to more general models that assume neither linearity of demand nor quadratic costs. These particular assumptions can be readily dispersed with.

Although discussion here has been restricted to the case of pure monopoly while the earlier analysis dealt with pure competition, the general approach can be adapted to deal with intermediate market structures such as monopolistic competition. Demand shifts that “flatten” market demand under the latter type of structure will induce
Pareto gains by closing the long-run gap between actual output and the level of output corresponding to minimum average costs. Thus, tourism-induced demand shifts will induce lower levels of excess capacity.

Some Evidence on Optimal Taxes

As discussed above, optimal tourism taxes should be imposed if the state wishes to maximize the rents extracted from foreign tourists, if there will be no retaliation against resident tourists traveling abroad, and if the local tourism industry is competitive so operators are not already extracting these rents with monopoly prices. With these assumptions, the optimal size of taxes depends on the price elasticity of travel demands as in Equations (6) and (9). Unfortunately, these elasticities are difficult to pin down empirically. In a recent survey of attempts to estimate international travel demands (Crouch and Shaw 1991) a wide range of empirical estimates is determined. The estimate derived depends on how demand itself is defined (e.g., number of visits or the value of tourist spending), how the price variable is defined, the
level of aggregation by tourist nationality, and the use of time-series versus cross-section data.

The Crouch and Shaw survey notes that price elasticities can be expected to increase in absolute size when expenditure data is used instead of the number of trips. This way, tourists are likely to alter their length of stay or average daily expenditure before they alter their decision to visit a country.

Review of a wide range of studies revealed a mean price elasticity of international travel demands of $-0.39$ that suggests demand is inelastic. Estimates varied around this mean, with a majority confirming the finding of inelasticity and none of the estimates, averaged over a particular estimation procedure, being greater than two in absolute value. With inelastic market demands, the types of optimal tourism tax formulae derived, in Equations (6) and (9), are inapplicable since they rely on the presumption that industries operate in the elastic region of their market-level demands. If such demands are inelastic, there is an increased scope for tourism taxes since tax-inclusive prices can be employed to push demands into price-responsive regions of aggregate demand. This is an econometric case for restricting elasticities to this range for monopoly firms, with failure to do so generating specification problems. As Peter Forsyth has pointed out (personal communication), even if competitive firm demands are elastic, industry demand may be quite inelastic so the same restrictions may be invalid in competitive industries.

Empirical studies of inbound tourism demands often neglect these difficulties. For Australia, recent studies have found inelastic demands by European tourists with various “price” variables (Bureau of Transport and Communication Economics 1988). Recently, however, inbound tourism demands have been re-estimated using a comprehensive price variable, the “full costs of a trip to Australia.” The relevant price elasticities are then found elastic (Australian Tourism Research Institute 1989). The latter estimates imply long-run price elasticities of $-3.3$ for Japanese and $-5.2$ for New Zealand travel to Australia. With these estimates optimal taxes on total planned tourism spending, using the discriminatory formulation Equation (6), range from $43\%$ to $24\%$ for Japanese and New Zealanders, respectively.

Such taxes would yield substantial public revenues. Moreover, provided it is the total cost of the travel that is the primary determinant of the demand for tourism (this will be so if most tourists come to Australia on packages or group tours), the requisite taxes could be levied as entry or exit charges, travel cost taxes, or general and/or specific excise taxes. Industry sources suggest that for Australia in 1989 about $16\%$ of tourists came on “group tours,” while $22\%$ came on “inclusive travel packages.” For particular groups (e.g., Japanese), the group figure is much higher than this, about $63\%$.

Substantial entry charges make sense from the viewpoint of residents since they can be imposed on foreign tourists alone. Such charges, however, unless concealed as landing-right costs, charges on fares, etc., raise the serious prospect of retaliation by other countries, thereby reducing any net national advantage. Another possibility is to levy either tourism-industry-specific complement commodity taxes, as dis-
cussed earlier, or uniform excise taxes on all goods and services. Both options would impinge on residents but, with uniform excises, residents would not face distorted relative prices on domestic goods and would benefit from an increased supply of public goods and/or reduced income taxes. A disadvantage of excise taxes is that they would need to be high to adequately capture the rents, particularly if constraints are imposed on entry charges. These issues provide an important agenda for research.

NON-MARKETED FACILITIES

Many tourism facilities are not marketed at all. They are supplied at a zero fee to all users. Sometimes, the failure to market may stem from prohibitive transactions costs, involving the use of roads, many beaches, public parks, etc. In other cases, it may be based on ethical considerations (e.g., temples in some parts of Asia). For simplicity, consider only the transactions costs motive and suppose these costs are fixed (i.e., lump-sum). Then an increase in demand for an item due to tourism makes it more likely that the item can be marketed profitably, since per capita transactions costs fall. If this is the case, then the analyses of Equations (1) and (2) are relevant with their appropriate tax prescriptions. If it is not so, even with an increase in foreign tourists, an item can still not be profitably marketed, then tourism can be immiserising as noted earlier and as proven elsewhere (Clarke and Ng 1991).

Given that the only policy options are the extremes of efficient pricing or “open access” resource use, it needs to be understood that transactions costs in enforcing efficient pricing need to be substantial if open access exploitation is to be favored. These costs must outweigh not only the environmental damage and congestion costs that stem from open access use, but also the possible monopoly rents that could be extracted from foreign tourists who demand the resources.

If there are significant transaction costs relating to monitoring and enforcement, then resort can usually be made to various regulatory processes or incentive schemes. These schemes have both pricing and regulatory components. Examples include fees for parking near congested beaches and facilities, taxes on petroleum products and automobile hire (car rental). In terms of well-known theories for dealing with “distorted” economies, it is always preferable to choose as a “second-best” policy an intervention that offsets directly the distortion.

It seems inappropriate to choose as a “second-best” policy general types of restrictions on tourism such as “entry taxes.” Such restrictions will have some effect in reducing pressure on unpriced environmental resources but will have, in addition, “by-product” distortionary effects that stem from reduced “gains from trade” advantages in other sectors not subject to external costs. It is generally preferable to utilize policy that specifically addresses the distortion in question.

ENTRY CHARGES AND TAXES

Entry charges are charges levied on foreign tourists at the point of entry to a country. Complement goods taxes are taxes on goods and
services that are complements to (i.e., consumed with) a variety of tourism amenities such as hotels, restaurants, and domestic transportation facilities. For simplicity, one may ignore the role for these types of taxes in public authority cost-recovery and thus disregard the role of the costs of airport management and customs’ services on desired entry charges. Similarly, the role of hotel taxes for recovering the costs of local public goods (e.g., law and order, fire safety, roads) may be ignored. These are very important issues; however, they are straightforward to analyze given the strong efficiency and equity arguments supporting the “user pays principle” in the provision of public goods.

Without transactions costs, economic analysis suggests that Pigovian taxes should be used to correct divergencies between private and social costs. Such taxes should apply to both foreign tourists and resident users alike. They should be directed specifically to the particular types of tourism goods and services that generate external costs. On the other hand, unexploited monopoly rents accruing to foreign tourists should be pursued by means of optimal tariffs directed to the specific goods and services where the unexploited monopoly power arises. These taxes should be levied only on foreign tourists.

If transactions costs are relevant, then an alternative approach is to utilize nonprice means of regulating resource-use. Thus, direct controls on resource utilization, such as regulations and/or prohibitions, can be considered. Still another alternative policy (Burns and Associates 1989) is to levy the requisite taxes not on the specific activities generating external costs or monopoly rents, where the costs of enforcement may be high, but on a small well-defined set of strongly complementary goods, services, and activities linked with tourism, such as “entry” and the use of hotels, where transactions costs of collection are lower.

Case of Entry Taxes

The monopoly rents stemming from site and facility uniqueness and, more generally, the monopoly power a country possesses when selling itself as a tourism destination, can be cost-effectively collected at a single well-defined set of points by means of an entry charge or tax. With perfect tourist foresight ahead of traveling, it makes no difference if the charge is levied at the point of entry, or exit, or whether it is levied as an independent charge or via a charge on a competitive transportation carrier. Thus, it is claimed that “exit taxes” differ because they alone can be used to discourage foreign travel by residents. This will be achieved by a differential tax on residents rather than an exit tax per se (Tisdell 1983). Of course, differential entry taxes applied to returning residents will have the same effect with foresight as exit taxes. Thailand charges residents 1000 baht exit tax (≈ US $40), while foreign and domestic tourists alike are charged 150 baht (≈ US $6) departure tax. Moreover, in terms of effects, charges for visas can be regarded as a type of potentially discriminatory entry tax, as can airport fees, berthing fees, and so on.

An entry tax is discriminatory if it is only imposed on foreign travelers. However, the discriminatory nature of such taxes is perhaps less
obtrusive if implemented upon entry than when a particular good or service is utilized. Then there is only the need to establish nationality once in a setting where residents are not simultaneously making purchases of goods and services at lower tax-free prices.

There are several disadvantages in using entry taxes to capture monopoly rents. One, by capturing rents on entry there is no incentive for foreign tourists to reduce their demand for the specific goods giving rise to the rents. Thus, the prices of the goods to residents will not be reduced, as should optimally be the case. Two, uniform entry taxes do not allow “first degree price discrimination” between different income classes of tourists, whereas, for example, hotel taxes do. Low-income tourists make an important aggregate contribution to the tourism industry and hefty up-front taxes on tourists will discourage such people from travel. Three, there may be unfavorable equity effects with respect to frequent short-term visitors and business travelers without some screening process.

Furthermore, entry taxes seem to have only a limited role for dealing with directly unpriceable external costs. First, because they are only levied on foreigners, they ignore the perhaps more substantial contribution of residents to such things as environmental degradation. Thus, the resources transferred by such taxes will be inadequate to provide effective countermeasures to preserve environmental quality. Second, the taxes themselves discourage entry and to this extent ameliorate environmental pressures, but they do not provide specific incentives to refrain from participating in externality-generating activities. The only way environmental costs in particular sectors could be significantly reduced is via punitive entry taxes that greatly inhibit foreign travel. Such taxes leave unaddressed resident-generated external costs and restrict the economic benefits accruing to sectors where external costs are minor and where residents gain substantial net economic benefits from tourism. It is worth emphasizing that even if entry taxes are set at national income-maximizing levels it is hardly guaranteed that tourism will confer net economic benefits on balance if there are continued, substantial, and unpriced environmental costs.

Complement Commodity Taxes

As already mentioned, these taxes have the advantage of price discriminating between alternative income classes of foreign tourists. They are also levied on activities in specific locations and can, if wanted, have both regional and structural features. As such, taxes can be levied on specific hotels, restaurants, and domestic transportation services that can be linked to specific environmental costs.

These taxes can constrain tourist demands that are particularly environmentally destructive. The impact of these policies, however, needs to be assessed carefully. Hotel taxes imposed to capture industry-generated external pollution costs may encourage certain tourist practices (e.g., illegal encroachment on public reserves, which may have their own costs). Moreover, there are complex issues in defining market areas for particular sectors of the tourism industry. These difficulties can impose unfavorable costs on the sectors that are subject to
taxes vis-à-vis other sectors. Taxes on the restaurant sector, narrowly-defined, will advantage the fast food supply sector. This problem of definition contributes to the administrative or regulatory cost of these measures.

If such taxes merely reflect rent-seeking by government, they will necessarily be seen as blatantly, and even offensively, discriminatory. There will also be the practical need to decide the nationality-status of consumers and perhaps the need to limit arbitrage transactions between residents and foreign tourists. In a practical sense, entry taxes remain a less obtrusive way of discriminating; although, as mentioned, they too have various disadvantages. In some developing countries, discriminatory taxes can be levied at the hotel level by insisting on hotel payment in a foreign currency when the local currency is significantly overvalued. *Ad valorem* hotel room occupancy taxes have been considered by many economists (Combs and Elledge 1979; Fujii, Khaled and Mak 1985) from the viewpoint of their incidence properties and their “exportability” (i.e., the extent to which they can be passed on to foreign visitors). The latter authors use time series data for Hawaii (USA) to estimate that about 2/3 of such taxes are exported for hotels that are resident-owned. This is a much higher figure than for other types of tourism taxes considered for entertainment, food, and general sales taxes. These latter types of taxes fall more heavily on residents. Two general points should be made about this work. One, the exportability of taxes would be much lower in Australia or continental US because of much higher levels of domestic tourism. Two, the motivation for the taxes considered in the papers is almost exclusively to compensate local governments for public services provided rather than, as in this analysis, to pursue rents or to correct externalities.

Finally, as a reviewer of this paper has emphasised, goods that are strongly complementary to tourism may be hard to find. Thus, hotels may be strongly complementary for some destinations, but for family-related tourism and alternative accommodation types it will prove less useful.

**CONCLUSIONS**

The general policy conclusion reached by this paper is that, without unpriced external costs, residents derive economic advantage from a relatively “open door” tourism policy and from having low financial, and other, visa restrictions imposed on tourists. This is truly irrespective of whether optimal commodity taxes are imposed on foreign tourist consumption. Such taxes will increase the benefits accruing to residents but is unnecessary to ensure net gains. This finding is, however, conditional on “efficient pricing,” or other types of regulatory policies, being used to offset the externalities associated with growth in foreign tourism demands. There is a strong case for getting such pricing policies right rather than attempting to restrict tourism directly.

Society benefits from sound resource management policies with or without increased tourism. A key issue is to devise such resource policies rather than to seek policies that attempt to limit tourism directly.
Of course with increased tourism, the gains from switching to policies such as "efficient pricing" are increased. Equivalently, there are increased costs in not doing so. Implementation of such policies guarantees that tourism will generate potential Pareto gains for residents.

Transactions costs issues provide a rationale for employing entry charges and other types of complement good taxes both for accessing monopoly rents and for dealing with external costs. Discriminatory entry charges provide one method of appropriating monopoly rents accruing to foreigners, although such taxes seem much less useful for dealing with external costs. Complement good taxes, such as hotel taxes, seem more useful for dealing with externalities. But, as a way of collecting monopoly rents from foreigners alone seem so blatantly discriminatory, they appear impractical. Other ways of dealing with significant transactions costs include regulatory processes such as direct controls on resource usage.

The analysis, as mentioned, has important linkages with the economics of immigration, and for that matter, with the economics of "guest-worker" schemes. Differences from the immigration analyses, however, stem from the distinctive impacts of taxes and public sector benefits on tourists as opposed to immigrants. Tourists do not pay income taxes but are subject to various commodity taxes and charges that may, though generally should not, discriminate between visitors and residents. Moreover, while it is known that immigrants draw less on the public purse than residents (Simon 1989), the resulting net advantages conferred on residents are presumably greater when it comes to tourists who are eligible for even fewer public benefits. From this viewpoint, tourist flows at a certain rate must be even more beneficial to the local economy than a comparable increase in population due to immigration. Specifically, a country's residents derive "gains from trade" advantages from either having a million tourists on average visiting or from having a million permanent new immigrant settlers. It is argued here, however, that these gains will be greater for tourists than immigrants because of their lower demands on the public coffers. If foreign tourists make a net positive contribution to reducing resident tax burdens, there is a case for promoting tourism via publicly-funded promotional activities, since the free market will undersupply tourists.

Finally, it should be stressed that the analysis in this paper focuses on the economic consequences of tourism and largely ignores social and cultural issues. The reason for this is not that economic analysis is irrelevant to such enquiry, but rather that the non-economic consequences of tourism are complex enough to warrant specific treatment. Tourism can be viewed as a process by which residents are brought into contact with new people with distinct cultures. The effects of this encounter can be viewed positively, given that tourists are generally well educated and affluent. But the effects also have negative aspects if host-country "hostility" and "local cohesion" manifest themselves as the response of residents to the visitors (Craig 1988). While formally these types of issues can be analyzed as positive or negative externalities, the ultimate issue of whether tourism acts as an international "melting
pot” or as a source of domestic tensions is a complex issue beyond the scope of the present analysis.

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