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The focus of this survey is on economic-based models of tourism. It attempts to give a rough overview of the use of economic theory in analysing tourism. However, a warning should be made at the outset - tourism is a complex subject: it is not sufficient to study tourism without considering the influence of such relevant issues as socio-demographic and socio-psychological factors, the impact of personal values and lifestyles, the continuing development of technology and transportation, urbanization, the growth in leisure time, and so on. These additional issues are covered in other sections of the handbook*).

The Consumer Theory Approach

One of the most important sources for the development of an economic explanation of tourism is the consumption theory. In the framework of microeconomic consumption theory, tourism demand can be explained by the utility maximization of an individual or household under the budget constraint, given complete information.

In neoclassical theory, the consumer distributes his known budget across the goods and services available at given prices in order to receive a maximum utility from the total amount of consumed goods and services. In order for this process to take place, the consumer must have complete

*) Contribution to Moutinho, L., - Witt, St., (Ed.), Handbook of Tourism Marketing and Management, Prentice Hall, 1988.

information concerning all possible combinations of goods and services as well as the ability to evaluate and rank them. The utility function provides complete information as to what utility from the various goods and services can be gained. The individual demand for tourism originates from a budget allocation process which maximizes utility. The demand for each good or each specific tourism service is a function of all prices and the consumer budget; leisure time is assumed to be constant and given.

Through time, complete demand systems were developed. One of the most well-know demand systems, called the "linear-expenditure-system", was developed by R. Stone. One direct application of demand systems was demonstrated through the work of O'Hagan-Harrison and Smeral (1987).

Within the framework of the neoclassical allocation model, one can integrate tourism demand in the following manner:

$$D_{ij} = f(p_{ij} \dots \dots \dots P_{nj}, Y_j)$$

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. .
. .
. .

$$D_{nj} = f(p_{ij} \dots \dots \dots P_{nj}, Y_j)$$

$D_{ij} \dots D_{(n-2)j}$ = demand for non-tourism consumer goods
in country j

$D_{(n-1)j}$ = domestic consumption of tourism services by country j

D_{nj} = tourism consumption abroad by country j

$P_{ij} \dots P_{(n-2)j}$ = prices of non-tourism consumer goods in country j (expressed as units of a homogeneous currency)

$P_{(n-1)j}$ = prices of domestic tourism goods and services in units of a homogeneous international currency in country j

P_{nj} = prices of foreign tourism goods and services in units of a homogeneous currency for country j with

$$P_{nj} = \sum_{k=1}^1 g_k P_{(n-1)k}, \quad g_k = \frac{D_{nj k}}{D_{nj}}$$

$$\sum_{k=1}^1 g_k, \quad j \neq k$$

Y_j = disposable income in units of a homogeneous international currency in country j

$$\sum_{i=1}^n P_{ij} D_{ij} = Y_j$$

n = number of consumer goods, $i=1 \dots n$

m = number of countries of origin, $j=1 \dots m$

l = number of destination countries,
k=1.....l

With a model thus developed, the demand for each consumer good, including that for tourism goods and services, is a function of prices and of disposable income. Savings can be thought of as a future consumption good and thus also finds a place within the model.

In the above model, if one makes the assumption of a two-stage decision process separable for each country, one can find an equation for the tourism demand of origin country j for the destination country k. In the first step, the volume of demand for domestic and foreign tourism goods and services from the consumers in the origin countries is determined. In the second step, the country of destination is determined according to prices of tourism goods in all possible destinations and the foreign travel budget restriction.

$$D_{njk} = f(p_{(n-1)k} \cdots p_{(n-1)l}, \sum_{k=1}^l D_{njk})$$

k=1.....l, k≠j

Total foreign tourism demand of all countries of origin j for a destination country k can be expressed as

$$D_{nk} = f(p_{(n-1)k} \cdots p_{(n-1)1}) \sum_{j=1}^m D_{nj}, \quad k=1 \dots 1$$

$$D_{nk} = \sum_{j=1}^m D_{nkj}$$

$$\sum_{k=1}^1 D_{nk} = \sum_{j=1}^m D_{nj} = \sum_{j=1}^m \sum_{k=1}^1 D_{nj k};$$

$$\sum_{k=1}^1 D_{nj k} = D_{nj}$$

The following functions represent the market shares in international travel:

$$D_{nj k} / D_{nj} = S_{nj k} = f(p_{(n-1)k} \cdots p_{(n-1)1}); \quad k \neq j$$

$$D_{nk} / \sum_{j=1}^m D_{nj} = S_{nk} = f(p_{(n-1)k} \cdots p_{(n-1)1}); \quad k=1 \dots 1$$

The explanation of tourism in the framework of microeconomic consumption theory progressed further through the contribution of K.J.Lancaster.

Contrary to the tenets of neoclassical theory, Lancaster's theory classifies goods and services not as the direct

utility objects, but rather according to their characteristics. Consumption is assumed to be an activity. The inputs of this activity are goods or services, alone or in combination. The output is a bundle of characteristics. This input-output relationship is called the "consumption technology". The ranking of preferences is assumed to be an evaluation of characteristics; the goods or services themselves are only indirectly ranked through their characteristics. The consumer decision is based on the maximisation of an utility function according to the characteristics of the goods and services as arguments, with a given consumption technology and a linear budget constraint.

In general, the utility maximisation problem can be formulated as a non-linear programming problem in the following manner: let z be a vector whose characteristics are the quantities of various attributes; let x be a vector the elements of which are quantities of various commodities; let p be a vector of corresponding prices, and y the level of income.

Thus, the consumer desires to maximise:

$$U = U(z)$$

$$z = f(x)$$

$$p'x \leq y$$

$$x, z \geq 0$$

The function $f(x)$ describes the "production" of attributes

by commodities. A simplification is provided by replacing it by the linear approximation Bx , where B is a matrix with as many rows as there are attributes and as many columns as there are commodities. The matrix B is then the consumption technology.

The special application of this theory for tourism is based on the assumption that, under certain conditions, it is possible to separate a set of activities and characteristics. Therefore vacation trips are for the most part independent of the non-touristic consumption of the traveller. In this manner, the whole spectrum must not be taken into consideration as it would be in the neoclassical theory. One consequence of the independence assumption is that changes in the prices of non-touristic goods or services cause no reaction in the travel behaviour.

Lancaster's approach is useful for introducing new goods or services without the necessity of a reformulation of the utility function as would be the case with the neoclassical theory.

For practical application of Lancaster's theory, it is useful to become familiar with the ideas of Young. Young shows that, when an individual maximizes a utility function according to commodity characteristics that are subject to budget and commodity constraints, then the resulting demand function contains commodity attributes as explanatory variables.

Many other models used to explain tourism demand are developed based on the central ideas of microeconomic theory, but not all explanations of special variants can be included in this survey (see references). The gravity and trip generation models are another special group of models which attempt to explain tourism demand. Their main assumption is that the amount of visits to a certain destination or city is a function of the population size of both the area of origin as well as the area of destination and the distance between them.

In the framework of macroeconomic consumption theory, a general relationship between income and consumption (with tourism demand as a special group in consumption) is assumed. Here we find a difference between short-term development and long-term growth.

Ideally, one assumes that, in the long run, total consumption will depend on the development of income, specifically the development of that part of income upon which the individual can rely. However, in the short run, total consumption will depend also upon the economic expectations of the individual. Because of travel and tourism's positions in the needs hierarchy, it can be considered a superior form of consumption (travel as a luxury good). The income elasticity of demand for travel and tourism will therefore be higher than that of total demand

of households and is in general greater than 1. This property of travel is the main reason for its strong dependence on developments in the "consumption climate" and on economic expectations. In periods of economic instability, such as when unemployment threatens, households tend to save more (preventive motive) and to reduce their consumption of high quality goods such as travel and durable consumption goods. It is much easier for the household to go without a holiday than to deprive itself of basic goods such as food, heating, lighting and clothing. However, an increase in saving at the cost of vacations causes only in the most extreme case a cancellation of the planned vacation. Normally, a reduction of vacation length, distance or lower daily expenditures will be the result.

Relatedly, the possibility also exists that a household in a situation of short-term income losses will not reduce its usual travel standard but rather finance travel from its savings. However, in the long term, an adaption in the level of tourism expenditures at the new income level will be necessary.

The implicit assumed rank-order of needs or the changes in the needs hierarchy are based on the idea that, in the process of economic development, special demand waves exist. After the satisfaction of a certain group of needs, the expenditures in the next level or group of needs grows above average. Upon the approximation of a certain satisfaction

level, expenditures in the next level begin to rise rapidly. The most well-known relationship between the income-level and a certain need group in the hierarchy was discovered by E.Engel in the year 1857. He established the "Engel's Laws", which claim that, the income elasticity of food is less than one. Following this discovery, the relationship between other commodity groups and income became the focus of many research programs. The results of research demonstrate the existence of a hierarchy, which starts with food, shelter and clothing, goes through the durable consumption goods to services, including travel. The described demand waves or the structural change in the growth process have the following impact on tourism demand: as with private consumption, it can be assumed in the growth process that the demand for tourism goods with a higher quality (such as entertainment, meals in restaurants, shopping, cultural attractions, etc.) receive a greater weight. In contrast, the expenditure shares of tourism goods of a lower quality (such as low priced accommodation, food and transportation) become less important. These changes in the consumption structure can occur due to structural changes in the specific vacation styles or because of the traveler's selection of other vacation styles. Specific vacation styles go through a special product life cycle. According to this concept, a single destination area can support several different vacation styles. The older, supply-oriented approach argues that a destination can have only one life cycle. The

application of the product-cycle-theory for travel is none other than a mix of explanation factors originating from the demand, production and trade theory. The cycle by itself offers no explanation; it is just a statistical documentation.

The Foreign Trade Theory Approach

Explaining the economics of travel and tourism according to the traditional view of foreign trade theory, such as the factor proportion theory of Heckscher and Ohlin - the "H-O-Model" - or according to Ricardo's theory of "comparative costs", ignores demand, an important factor in international travel.

However, the H-O-Model can be used reservedly to explain the intersectoral exchange of industrial goods and tourism services. For production to take place, certain necessary factors must be available in each country, but the actual amount per country can vary. The production of tourism services is relatively labor intensive, while the production of industrial goods is relatively capital intensive; the factors are measured as flows. In the industrialized countries, the capital intensity is higher than in the developing countries. The result of this situation is that the industrialized nations attempt to specialize in the production of capital goods while the developing countries

focus on the production of services, such as tourism services; both types do their trade in their own specific manner.

The classical "Ricardo Model", although also not a thorough explanation for international trade, is, like the H-o-Model, a supply-side oriented model similarly useful for explaining the international exchange between developing or socialistic countries and industrial countries. The exchange is mostly complementary (raw material or island-beaches against industrial goods). For example, countries which have just raw materials or unspoiled landscapes with certain climate conditions must become specialized in this direction and thus have goods to exchange for such industrial goods or technologically advanced products whose production is not possible due to the lack of technical knowledge ("availability hypothesis"). Developed countries which have a monopoly on such natural resources as climate, island beaches, mountains, culture or special technical knowledge do not become specialized to the same degree.

Contrary to most orthodox trade theories, which assume a given demand and focus more attention on the supply side, neoclassical theory attempts to create a synthesis between supply and demand.

The "neoclassical synthesis" has a high degree of abstraction and a very low empirical content; however, the

neoclassical model has the important didactic function of focusing on the demand side.

For the new differentiated forms of tourism is the "new view" of trade theory approach more appropriate and explanatory. This "new" view focuses on the international exchange of differentiated products and services between countries with similar stages of development and similar preferences (an intra-sectoral view as opposed to the inter-sectoral view of the classical theories). These kinds of international exchanges are dominated by the preferences of the people and is to be understood as a trade of differentiated goods and services or an exchange of equal goods of different types. These goods and services are produced in the supplier countries with a different input mix and are in competition with similar - but not identical - products in imperfect markets; on the supply side economics of scale are generated. Each good or services has its own demand curve with a negative slope. An increase in the relative prices induces just an imperfect substitution. In this case, the international exchange is created so that the consumers purchase goods or travel to a given destination perceived as having real or subjective qualitative advantages or prestige. One consequence is that goods are purchased in the foreign destination even when the price is higher than at home. It is possible that an equal assortment of tourism services are bought in the home country by foreign visitors as are purchased by citizens

from the home country abroad. Some examples of this are the exchange between cities in the framework of urban tourism (Paris vs. London or Rome vs. Vienna) or in other forms of tourism such as ski vacations (Vermont against Tyrol). This exchange, mostly free from the influence of prices, will grow in the future with the growth of wealth.

In the framework of monetary trade theory, tourism is a flow of aggregated exports and imports of services. Given this perspective, the basic points of importance are:

- The effect of an autonomous increase in tourism demand on the economy or the size of the tourism export multiplier.
- The effect of increases in income on foreign travel by residents or the size of the propensity to import.
- The elasticity of travel demand in relation to changes in prices and exchange rates.

Tourism and the Theory of Services

One of the best known explanations of long-term development of services is the three-sector-hypothesis. The main content of this approach with respect to tourism can be summarized as follows: with growing per capita income, the demand for goods changes from primary production to secondary production, and then for goods from the tertiary production,

or the service sector. The fast growth of the service sector has two main components:

- The change in the needs structure of private households to bank and insurance services, travel, education, etc.
- The growth in the intermediary demand from producers which need always more tertiary goods, such as business trips and consulting, for the production of secondary goods.

As a result of this growth, tourism - and in the future, its specialized forms such as city tourism - will gain advantages from the structural change.

In general, technical progress has a lesser impact at the tertiary level than in the primary or secondary level. This is mostly the case for all sectors which, like the tourism sector, are dominated by personal services because of the few possibilities for mechanization and rationalization. Certain areas in the tourism industry could receive advantages from technical and organizational innovations, such as travelling with large tour busses, large hotels located at the city limits, jumbo-jets, airlines with their own hotel chains, and so on.

The special conditions for service production can be summarized as follows: tourism is dominated by the special

services of the hotel and restaurant industries. The special conditions for production in these industries are generated through the non-storable and non-transportable character of their services. Contrary to industrial production, production and demand in the hotel and restaurant industries are identical. Changes in demand can not be equalized by stock changes; rather, cycles in the capacity utilization are the result. In short, supply in the tourism industry is simply a supply of capacity, with the number of services produced a function of demand.

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