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ECONOMICS OF TOUR PACKAGING

*University of Hawaii*

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ECONOMICS OF TOUR PACKAGING

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE  
UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN ECONOMICS

AUGUST 1984

by  
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#### ACKNOWLEDGMENTS

I would like to express my thanks to the Hawaii Visitor Bureau for allowing me to use its expenditure survey data, and to Bill Remus for his support and encouragement.

## ABSTRACT

This dissertation analyzes the phenomenon of tour packaging from an economic viewpoint. There are many instances in the market-place of goods being sold as packages. Tourism products are just one example. The literature on packaging in general is reviewed with the conclusion that most economic explanations for this phenomenon (except for Barzel) conclude that monopoly power is a prerequisite. Tour packaging under competition and under monopoly conditions are analysed. The types of tours and the price structures are different in each category. In monopoly conditions only one type of tour is offered (usually all-inclusive), whereas in competitive situations companies offer basic, intermediate and inclusive tours.

Data on tours to the Hawaiian Islands were analyzed. Basic tours were found to offer an average of 14% discount over the equivalent retail costs. Intermediate tours and inclusive tours were found to charge a small premium. Progressively more tourists travel independently than on a basic tour; more travel on a basic tour than on an intermediate tour and more travel on an intermediate tour than on an inclusive tour. The addition of components to a tour requires an additional degree of taste similarity among participants. It was found that the more inclusive the tour, the less variance in socio-economic characteristics of the tourists.

The consumer's vacation mode decision is modeled as a two-stage decision. The first stage is the consumer's decision of whether to

travel independently or to purchase a tour. The second stage is, given that a tour is chosen, the type of package tour that will be purchased. Logit analysis is used to predict the consumer's choice. It is found that there are three factors affecting the first stage of the consumer's vacation mode decision. They are the information and transaction costs associated with each option, the price difference (or ratio), and the additional utility perceived by traveling with a group. The second stage of the decision model was found to be affected only by the number of destinations visited (a proxy for information and transaction costs). Price difference (or ratio) and socio-economic factors were not found to be significant factors in the vacation mode choice.

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## CHAPTER ONE

### INTRODUCTION

Tourism is one of the world's largest industries and is growing rapidly. In 1981 there were 290 million worldwide foreign tourist arrivals contributing an estimated \$100 billion in expenditures (1). The package tour market is a significant portion of this industry and is therefore an important economic entity. It is reported that in 1982 seven million tour packages were sold in the United States(2). In 1975 package tours were responsible for \$4 billion in revenues from 5.2 million travellers in the United States(3). It has been alleged that 8% of U.S. tourists would not travel if package tours were unavailable (4). This would represent a loss to the travel industry of approximately \$300 million. Another 42% of vacation travelers would significantly change their travel plans. Overseas travel is more dependent on package tours than is domestic travel. In 1978 more than 40% of US residents travelling overseas bought package tours(5).

A tour package is the combination of the components of a vacation such as accomodation, transportation, entertainment, meals etc. which are sold to the consumer at a single price. The consumer purchases the whole package and does not know the cost of the individual

components. In most cases, the component parts can also be purchased separately through a travel agent or directly from the producer. Package tours vary considerably in their content and fall into three different types: the basic tour which includes transportation and accomodation only, the intermediate tour which offers some additional sightseeing or entertainment at the destination, and the inclusive tour which includes more entertainment than the intermediate tour, meals, and is often escorted. Tours may be to one destination only or they may be multi-destinational.

Tour packages are just one example of goods and services being sold in packages or bundles rather than individually. There are many other examples. Restaurants offer the consumer complete dinners which package together several component dishes. Companies selling personal computers are now offering their products (terminal, printer, memory) as packages. Medical insurance companies combine many services into a package or bundle for sale to the consumer (physician services, pathology, radiology, physical therapy, etc.). Furniture stores often bundle together pieces of furniture as room sets; for example, bedroom sets or dining room sets. Clothing is sometimes sold as complete outfits rather than individually. In some cases, the components of these bundles may also be purchased individually. This is referred to as mixed bundling by Adams and Yellen (1976). When goods are available only as part of a package, this is called pure bundling.

The joint selling of goods was discussed in the literature in the late nineteen fifties and early nineteen sixties by Bowman (1957), Burstein (1960), Hilton (1958) and others. The phenomenon was referred to as tie-in sales or full-line forcing, and assumed monopoly power on the part of the seller. It will be demonstrated below that tour packaging is a competitive industry. Therefore, since both of these concepts presume monopoly power they have little relevance to tour packaging or the other competitive examples mentioned above. In the last few years there has been a resurgence of interest in the phenomenon of joint selling with the general observation that tie-in sales or commodity bundling take place under competitive situations also. Adams and Yellen's work (1976) on commodity bundling does much to explain the consequences of bundling for the producer and the consumer in theoretical terms but does not explain its existence in the competitive market. Barzel (1981,1982) has done most to develop a theory and understanding of competitive tie-ins. He concludes that competitive tie-ins will tend to include substitute commodities and exclude complementary commodities. An example of this can be seen in the way that medical insurance packages are constituted, as will be demonstrated below. It can also be used to limit consumption of an unpriced attribute. A limitation of all of the existing literature is that it mostly considers the bundling decision from the seller's viewpoint.

This dissertation will explain the competitive bundling example of tour packaging from both the supply and the demand side. The theory will be developed for tour packaging but will also be applicable to other competitive situations. The producer's decision of what and when to package will be analysed. A tourist vacation mode decision model will then be developed to explain consumer's choice. Logit analysis will be used to test the model.

The dissertation will be organised in the following way. Chapter Two will review the relevant literature on package tours and on the joint selling of goods and services. Chapter Three will explain and analyse the tour industry, using Hawaii as a case example. Chapter Four will develop a theory of package tours from the supply side. Chapter Five will analyse the demand side, and will develop a model to predict the demand for package tours. The model will be tested empirically using data from Hawaii Visitors Bureau 1980 Visitor Expenditure Survey. Chapter Six will contain the results of the empirical test. Chapter Seven will summarize the dissertation findings and will discuss policy implications and areas for further study.

Footnotes

1. "National Tourist Offices", Special Report #46, International Tourism Quarterly, 2 (1983), 48 - 61.
2. Waters, Somerset R., Travel Industry World Yearbook: The Big Picture, 28 (1984), 106.
3. Touche Ross and Co., Tour Wholesaler Industry Study, 1975, 4.
4. Ibid.
5. Waters, Somerset, Travel Industry World Yearbook: The Big Picture, 23 (1978), 36.

## CHAPTER TWO

### BACKGROUND OF THE STUDY

The purpose of this chapter is to review the literature that relates to the problem of why tours are sold as packages, and why consumers purchase package tours. First of all the literature on package tours will be reviewed in the light of this problem. Then the economic literature on why goods in general are sold in packages or bundles will be reviewed with the intention of finding relevant theories to explain the packaging of tours.

#### 2.1 Literature on Package Tours

The literature on package tours is sparse. This section will review this literature, and some of the general tourism literature that is relevant. The major study on the demand for package tours was done by Askari (1971). He attempted to determine the factors which affect this demand. To do this, he used data from a large tour operator and studied tours from different states in the U.S. He theorized that the five relevant variables affecting demand for a package tour are (1) the length of the tour in days (2) the number of attractions on the tour (3) the point of origin of the tour (4) the

seasonal time of the tour, and (5) the price of the tour. 'Number of attractions' data were unavailable, so he used number of cities or countries visited as proxy variables. Round trip air fare was used as a proxy for point of origin. Seasonality was not included in his estimation due to lack of data; this variable will however have a strong affect on the demand for and price of the tour, since most people travel in the summer months. Also it is in the peak months that tourist facilities are fullest and charge peak prices. His model then was only able to include two of the five variables that he theorised should be included. These two were the price of the tour and the length of the tour.

The model he tested was the following:

$$N_{\alpha}^i = f(Y^i, RF^i, PD_{\alpha}, NP_{\alpha} )$$

where  $N_{\alpha}^i$  is the total number of people taking tour  $\alpha$  from state  $i$ .  $Y^i$  is per capita income for state  $i$ ,  $RF^i$  is round trip air fare from state  $i$  to point of origin of tour,  $PD_{\alpha}$  is the price per day of tour  $\alpha$ ,  $NP_{\alpha}$  is the number of attractions per day on tour  $\alpha$ . The estimated equation was found to be significant at the 5% level and is as follows:

$$N_{\alpha}^i = 9.68 + .0035(Y) - .0025(RF) - .32(PD) + 16.05(NP)$$

with the income, price per day and number of attractions significant at the 1% level. Price per day elasticities were found to be very high for all states - between 3.36 and 8.32, indicating that

consumers are more sensitive to the price of the tour than any other variable.

The major limitations of this study are firstly the data inadequacies already discussed. Secondly, Askari has no theoretical justification for the variables he uses. He does not discuss the economic reasons for packaging goods, nor does he consider the consumer's decision to purchase a package tour rather than an individual vacation. Also, since his data come from only one firm, his analysis does not consider the supply side. He makes no attempt to explain why package tours are offered and what the critical factors are in determining their constitution. Askari only considers those who travel on package tours and does not consider the vacation mode options.

The supply side of packaging tourism products has been analysed by Kinberg and Sudit (1979). They develop an algorithm for use by producers in determining the optimum bundle of tourist facilities to offer. It is a more comprehensive analysis than Askari's since it includes destination bundling, facility bundling by resorts, as well as package tour offerings.

For example, they consider a tour operator's decision of whether or not to bundle two destinations in one tour, or whether to offer say London and Paris. They describe eight possible bundle arrangements:

London and Paris; London; Paris	}	(mixed bundling)
London and Paris; London		
London and Paris; Paris		
London and Paris		(pure bundling)
London; Paris	}	(pure components)
London		
Paris		
No tours		

The analysis could also apply to the decision of which elements to put into a package tour.

Kinberg and Sudit go on to suggest that in order to compare these bundle offerings, the profitabilities of each must be calculated. The expected profit from a bundle offering is calculated by multiplying together the number of customers who purchase this offering, the probability of them purchasing it rather than another option (the transitional probability), and the additional profit associated with the sale.

The empirical problems of estimating these probabilities are great. Also if the company has a large number of possible bundles the calculations become very tedious. The authors then suggest an algorithm to facilitate the calculations.

The algorithm consists of five steps for the producer who is considering bundling:

1. Identify all possible bundles.
2. Eliminate any non-profitable bundles.
3. Eliminate all mutually exclusive bundles.
4. Eliminate all bundles with unitary transitional probabilities.
5. Analyse the incremental profitability of each bundle.

Their conclusion is that those bundles which have positive incremental profitabilities should be offered for sale.

They discuss the possibility of utility subadditivity in tourism for the consumer due to constraints on the purchasing of tickets, rental cars etc. They do not consider the possibility of convenience (in the form of lowered transaction and information costs) for the consumer when he buys a package tour. In fact they state that "customers are by definition at least as well off, and often better off, buying the same services separately with no strings attached"(1). Subadditivity is also assumed on the supplier's side since bundles of transportation and ground services are priced lower than the components.

At the resort planning level, when deciding which facilities to offer, consumer utility is superadditive, and higher prices can be charged by those resorts with more facilities. They also consider destination bundling to be superadditive in profits since costs are sub additive. It is cheaper to go from A to B to C than to go from A

to B to A to C. They give no discussion of economies of scale. If subadditivity is true for both producer and consumer then why bundle? The authors do not address this critical issue. Since vertical integration is a common occurrence in the tourism industry, they then go on to suggest procedures of allocating joint profits among the different cost or profit centers. Bargaining power, availability of substitutes, and fairness are suggested as criteria. After developing a laborious profit appropriation method based on the fairness criterion, they also suggest a simpler method. This recommends that each component receive 'the profit it generated prior to bundling', and that the profit increment due to bundling be allocated 'in equal shares' (2). Of course, this assumes that bundling enhances profitability, which in the long run, is a sound assumption.

Theoretically this paper models reasonably well the bundling decision for the individual producer. However the model is empirically intractable. It also lacks an adequate economic explanation for why consumers purchase package tours. A conclusion of their theory is that the consumer is always better off purchasing the components individually, a conclusion that is contradicted by reality.

Rugg(1973) developed a model of tourist destination choice using Lancaster's consumer theory which assumes that consumers gain utility from characteristics produced by the product - in this case the destination. Rugg considered climatic, religious and cultural conditions and the degree of familiarity with the destination as

characteristics. He included a time and budget constraint, both of which include transportation costs (time and money) between alternate destinations. Even though the model predicted destination choice well it did not consider the vacation mode choice at all.

Witt (1983) takes Rugg's analysis of vacation choice further. He not only considers destination choice, but he also performs a cost/benefit analysis for the consumer choosing a vacation. He divides vacation cost into two parts: that which is paid to the travel agent before the vacation and that which he spends while at the destination. This is further divided into committed expenditures on basic requirements (e.g., meals and transportation), and uncommitted expenditures on entertainment, souvenirs and gifts. He also suggests that in the long run a consumer learning process takes place. Information about the destination circulates as more and more people visit it and go back and tell their friends. As a result a polarization of destination choice ensues. Witt uses probit analysis to test his theory which is a binary choice model of vacation choice. A limitation of his analysis is that he makes the assumption that all vacations are pre-paid through a travel agent, and only considers the difference in destination choice and vacation cost as variables. He does not discuss vacation mode, even though the use of a travel agent is assumed. His cost breakdown gets close to the package tour decision, but does not take it far enough. Guitart (1982) in his analysis of package tours to the Mediterranean also considers this

expenditure breakdown. He refers to package prices and 'out-of-package' purchasing power in each destination country. The latter, of course, is a function of exchange rates.

The most obvious weakness in the package tour literature is its inability to explain the vacation mode decision of the tourist. The production of package tours is only briefly discussed. Since the literature on package tours does not help to explain why they are produced or consumed, the generic economic literature on the joint selling of goods and services will now be reviewed to determine whether any helpful insights may be found.

## 2.2 Literature on Joint Selling

Three concepts are used in microeconomic literature to describe the phenomenon of selling goods jointly rather than individually. They are 1) full-line forcing, 2) tie-in sales, and 3) commodity bundling or packaging. The first two terms have different and specific meanings, whereas the third concept is more general in nature.

The following sections discuss each of these theoretical concepts separately, and critically evaluate their relevance to the case of package tours.

### 2.2.1 Full-Line Forcing

Full-line forcing refers to the practice of 'forcing' a number of goods on the consumer, by creating an all-or-nothing offer. In order for the consumer to purchase one good he must also purchase other products in the line. Usually more than two goods are involved. The goods can have independent demands, be substitutes or complements. The producer is assumed to have monopoly power in at least one market in order for him to practice this technique. The tie-in of these other goods allows the producer to increase monopoly profits.

Burstein (1960) points out that many monopolies are unable to extract full monopoly profits without some auxiliary mechanism such as full-line forcing. Burstein, however, discounts the 'extension of monopoly' rationale for forcing or tying some goods together. In cases where the tied goods are very low price items such as staples, ink, salt etc., and the tying monopolist's share of that market is very small, the leverage rationale is inadequate. Full-line forcing is not applicable to package tours because there is usually no monopoly power, as will be demonstrated below.

Full-line forcing is similar in some ways to vertical integration when monopoly power exists and is a natural behaviour for monopolists in their attempt to extract the maximum monopoly profits. Vertical

integration is a common occurrence in the tour industry. Many international airlines also own hotel chains, car rental companies and other facilities. Due to the lack of monopoly power in the industry, however, full-line forcing does not explain the phenomenon of package tours.

An example of full-line forcing in the tour industry is the case of the People's Republic of China. The government here has monopoly power in selling its package tours. It also decides which components and cities will be included in the tour. This allows the government to capture monopoly profits.

### 2.2.2 Tie-in Sales

Tie-in sales refer to the practice of making the sale of one good contingent on the sale of another, so that both goods are only offered for sale together. Tie-in sales usually occur between two goods which are complements in some way. Often one is durable (such as a machine) and the other is non-durable and is needed as a supply for the durable good. Examples are the tying of ink to the sale of printing machine, and staples to the sale of a stapling machine.

The major works on tie-in sales are by Bowman (1957), Markovits (1967) and Burstein (1960). Much of this literature assumes that monopoly is a prerequisite for sellers to engage in tie-in sales, and

analyses the phenomenon solely from the producer's viewpoint. If a producer has a monopoly in one good, by tying another good to it, the monopoly power is extended. The legality of tie-in sales has been under scrutiny for a number of years. The Supreme Court in 1949 stated that:

"tying arrangements serve hardly any purpose beyond the suppression of competition." (3).

The major reasons for a producer to engage in tie-in sales, as discussed by Bowman and others, are as follows:

a) To evade price regulation . A consumer buying two or more tied goods is only concerned with the price of the total package. Therefore if the price of the tying good is regulated, the price of the tied good can be increased, thereby increasing the price of the package and avoiding price regulation. Kinberg and Sudit(1979) state that this is true in the tourism industry:

"Bundling of air transport and ground services has been used by airlines not only as a marketing tool but occasionally as a means for differential pricing practices that were otherwise barred by regulation or cartelisation". (4).

One example of tie-in sales in the tourism industry is the case of Budget Rent-a-Car and Aloha Airlines in Hawaii selling a package consisting of airline and car rental (5). Since airline prices were regulated, Aloha could not reduce its fare. It therefore came to an

agreement with the car rental company who offered their product at a much reduced rate. Allegedly, then, Aloha transferred some of the money to Budget disguised as advertising expenses.

The net effect was the same as if the air fare had been lowered. This case reached the courts when Roberts Waikiki U-Drive contested their action. They claimed that unfair competition was taking place because Budget was pricing its product below cost. The court ruled that the fly-drive package was not illegal and did not substantially lessen competition. They also ruled that there was no attempt to conspire or to monopolise the market. Therefore neither the Clayton Act nor the Sherman Act were violated.

Even though this is an explanation for some of the bundling seen in the tour industry, it is not an adequate explanation for all tour packaging. Also, since the deregulation of the airlines, there are very few instances of price regulation in the travel industry.

b) As a counting device to achieve price discrimination. Tying can achieve price discrimination when there are two groups of consumers who use the tying good with different intensities. The more intensive users have less elastic demands. Since the tying good (usually the durable good) must be sold at the same price to both groups, more consumer surplus can be extracted from the intensive users by tying the supplies to the sale of the durable good. The producer then receives maximum return from each separate market.

Hansen and Roberts study metered tie-ins in which a good is used in fixed proportions per unit of service. They show that tying is neither a necessary nor a sufficient condition for price discrimination to occur. This is, they say, because the assumption that more intensive users of capital goods have less elastic demands is irrelevant. This assumption has led others to the price discrimination conclusion. Burstein (1960) suggests two criteria for the price discrimination motive to be successful: (a) the producer of the tying good must not already be selling the tied good above marginal cost, and (b) there must be no risk and uncertainty.

In the rental market, tying contracts also achieve the goal of variable rental rates if there is a positive correlation between the purchase of the tying good and profitability of using the tying good. This in effect charges the rentor for the depreciation of the durable good which is being rented, since more intensive users will contribute more to the depreciation. For example, when renting carpet shampooers the carpet shampoo is often tied to the rental. Then those who use the shampooer more and thereby contribute to its depreciation, pay for that by purchasing more of the shampoo.

This rationale does not appear to explain tour packaging since consumers tend to consume tour elements in the same intensity.

c) Technological Compatibility. Goods are often tied together if for technical reasons they have to be consumed together. This rationale for tying allows producers to control quality and to prevent the use of inferior products. An example might be the use of a special kind of staple in a stapling machine.

Of the above three explanations for tie-in sales, only one applies to package tours, and that is to avoid price regulation. The others are dependent on either monopoly power or bundling of similar commodities.

### 2.2.3 Competitive Tie-Ins

Barzel (1981,1982) has studied tie-ins under competitive situations, and has identified reasons other than those based on monopoly power for the tying of goods. He uses the example of medical insurance packages on which to base his analysis. Not all consumers of medical insurance have the same valuation of a given medical service. Those whose average valuation of a component service is less than the unit cost are called adverse selectors and Barzel shows them to have a more elastic demand than non adverse selectors. Even though services included in a medical insurance package tend to be substitutes, they will be closer substitutes for some consumers than

for others. For example, for people over 65 years of age, nurse visits, nursing homes and hospital stay are substitutes. Therefore, insurance packages for this group will tend to include all three. Insurance packages for younger people for whom these are not substitutes, will tend to include only hospital stay. Those for whom the services are better substitutes will be those with higher demand elasticity, i.e. adverse selectors.

"The merging will have little effect on a person for whom these are not close substitutes, but for those to whom the two are closer and closer substitutes, the incentive to avoid buying the package becomes increasingly strong."

(6)

The individual will only purchase the package if his valuation is greater than or equal to the cost. Those consumers for whom the components are substitutes are adverse selectors and will not purchase the package since their valuation is less than cost. Thereby the abuse of the plan will be reduced. Similarly complements will be excluded from the package.

"...the person for whom the two are better complements will have the greater demand elasticity for the package. Thus by excluding one or other of the two complementary goods from the package, the person with greater price elasticity will be more severely denied the opportunity for excess utilisation."

(7)

Barzel concludes therefore that insurance packages will tend to

contain substitute services, and complementary services will be eliminated to decrease adverse selection. He tests this theory using data from Blue Cross medical insurance packages which include nurse visits, nursing homes and hospital stays for senior citizens. Also, insurance packages which required co-payments were found to be more prevalent for individuals whose value of time was less i.e. senior citizens and the unemployed. This however cannot be generalized to other competitive tie-ins without some modification. Tie-ins will exist where the gain they generate exceeds the cost of creating the tie-in. There are cases where there is a fixed 'admission charge' and zero marginal price for use of the services. Examples are clubs who charge annual fees and do not charge for or restrict use. In this case, the producers have incentives to prevent overuse of the services and thereby reduce losses. The price of a package tour usually includes specific goods and services. However, it is not yet clear whether they will be consumed in known amounts or whether there are incentives for the tour operator to restrict usage. Barzel's analysis will prove useful when developing a theory of package tour components.

Barzel (1982) considers another important aspect of competitive tie-ins. Many products have attributes that cannot be, or are not, priced. For example, the space or time taken up in a restaurant, time spent on a golf course, or cream with coffee. He shows that excess use of unpriced attributes such as cream and sugar can be prevented by raising the price of a good which is complementary to, and correlated

with the unpriced attribute. The seller may charge a relatively low price for the tying good, and a high price for the complement to the unpriced attribute. Restaurants who are concerned about the time and space that diners consume, may price entrees relatively low, and desserts and after dinner drinks higher since they are complementary to the amount of time spent in the restaurant. Golf courses are unable to price the time spent on the course. By forcing golfers to rent carts and therefore get through the course more quickly, time is controlled, and excess utilisation is eliminated.

Tour packages almost always have a tour guide or escort who is available to provide the tourists with information about the destination (8). Advice will be given about customs, currency exchange, tours and excursions, entertainment and transportation. Since these services are not charged for, there may be a tendency toward overuse. The information given, however, may lead to the sale of an optional tour by the tour guide which will bring him commission but the consumer is not charged for the information. Inclusive tours with escorts who accompany the tour will give more information in an unpriced way. This is often why people purchase inclusive tours - so that they have access to this information. Individual travelers must locate the information themselves.

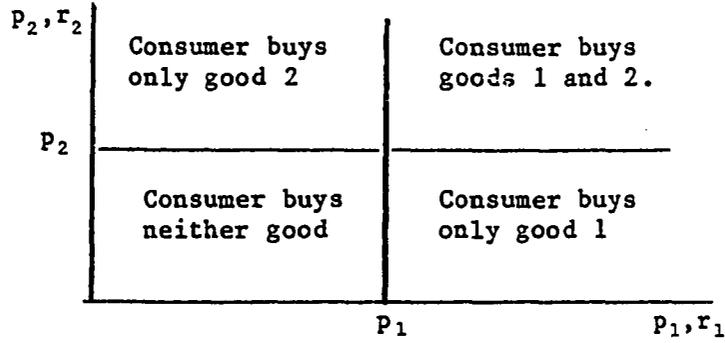
#### 2.2.4 Commodity Bundling

Commodity bundling (or packaging) refers in a more general way to the joint selling of goods or attributes. Adams and Yellen (1976) in their work on commodity bundling consider both the producer's profit consequences and the normative consequences. They assume monopoly power on the part of the producer. They discuss three different strategies of selling goods: pure components, pure bundling and mixed bundling strategies. The pure components strategy involves the selling of the component goods separately only, pure bundling involves selling the goods together as a bundle only, and mixed bundling involves offering the goods for sale either as a bundle or individually. Adams and Yellen assume that in a mixed bundling strategy, the combined bundle price will always be less than the sum of the individual prices, since otherwise the goods would be bought separately. In other words they assume away superadditive utility. (Superadditive utility means that the utility of the components when consumed together is greater than the sums of the utilities of the components). It is not yet clear that this is a correct assumption for the package tour market. At first glance it appears that superadditive utility or scale economies which are passed on to the consumer must exist. Otherwise consumers would have no reason to purchase packages. This will be examined in the next chapter.

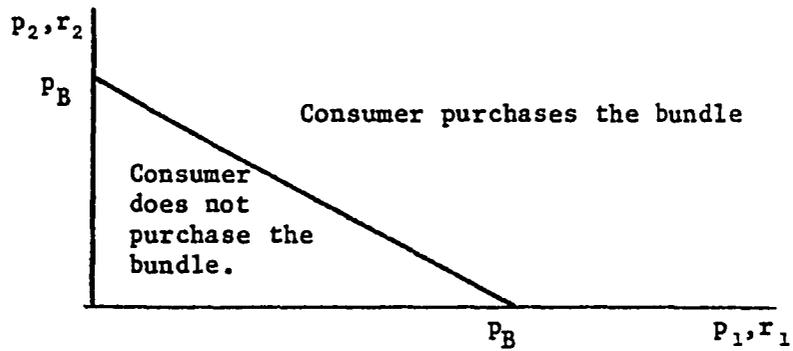
Adams and Yellen explain the increased profitability of bundling goods due to reasons other than economies of scale and complementarity in consumption. Their theory assumes away these two characteristics and the existence of information and transaction costs. Both of these costs, however, apply to the tour packaging industry. Their main thesis is that commodity bundling is profitable when consumers can be sorted into groups with different reservation prices for goods. A consumer's reservation price is the maximum price he is willing to pay for a good. The assumption is that consumers will purchase a good if and only if their reservation price for the good is greater than or equal to its price. Figure 2 shows diagrammatically which goods would be purchased under a pure components strategy, pure bundling strategy, and a mixed bundling strategy. For each graph the horizontal axis represents the price of good one - both the actual price  $p_1$ , and the reservation price  $r_1$ . The vertical axis represents the same thing for good two ( $p_2$  and  $r_2$ ).  $P_B$  represents the price of the bundle.

Figure 1

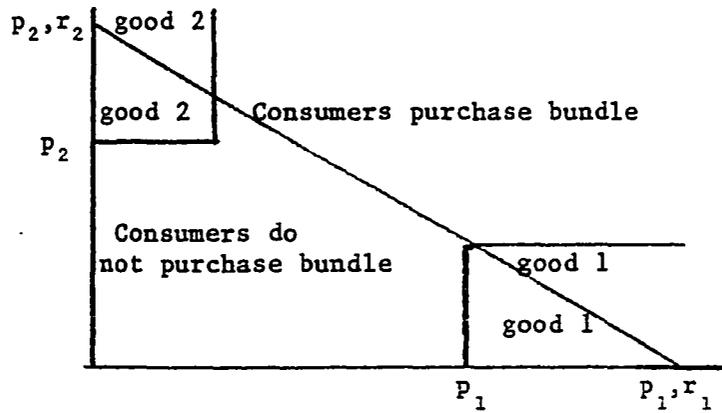
a) Pure Components Strategy



b) Pure Bundling Strategy



c) Mixed Bundling Strategy



They discuss the ability of each of the three strategies to maximize profits for the seller by comparing each strategy with pure price discrimination. Figure 2 summarizes the ability of each of the three strategies to achieve extraction, exclusion and inclusion, all of which are achieved by pure price discrimination. Extraction refers to the complete extraction of all consumer surplus. Exclusion refers to the exclusion of all consumers whose reservation price is less than the cost of the good. Inclusion refers to the inclusion of all consumers whose reservation price is greater than the cost of the good. Ideally, all three of the above conditions should be met. The important factors which affect the profitability of each strategy are costs and the distribution of consumers' reservation prices.

Figure 2

Effectiveness of Bundling Strategies

	Pure Components	Pure Bundling	Mixed Bundling
Extraction	Violated if downward sloping demand curve.	Yes - if bundle demand curve is extremely elastic.	Yes - if there is a negative correlation between valuation of goods.
Exclusion	Yes	No - cost of a good may exceed reservation price.	Better than pure bundling.
Inclusion	Violated if downward sloping demand curve.	Yes - if bundle demand is extremely elastic.	Yes - if there is negative correlation between the valuation of goods.

Mixed bundling is more profitable than pure bundling whenever some consumers are excluded from buying the bundle because their reservation price is less than cost. This is because the mixed bundling strategy offers some goods for sale individually which the consumer wishes to buy. The consumer will not purchase them under the pure bundling strategy since he does not value the bundle highly enough. Mixed bundling is also more profitable in that it allows monopolists to extract the consumer surplus of individuals with high reservation prices for both goods separately.

Mixed bundling is more profitable if there is a negative correlation between the reservation prices of the two goods. One consumer may value good A very highly, but his total valuation of the bundle is less than its price. Therefore he will not purchase the bundle. However, when A is offered for sale individually he is willing to pay a high price for it. This explains why certain dishes are offered a la carte in restaurants. It allows those consumers with high reservation prices for one dish to purchase it and full consumer surplus is extracted. The complete dinner is offered for those whose reservation prices for different dishes are more uniform.

Tourists who have high reservation prices for particular experiences, events or destinations are more likely to buy them individually. Tourists whose reservation prices for the elements of a package tour are more uniform are likely to purchase the package.

From the producer's viewpoint, he may be able to increase his profits by offering only a package tour.

Consumers with high reservation prices for the bundle and little variance in their reservation prices for the components (or vice-versa) can be very profitable to the producer. Therefore bundling is often more profitable than pure components strategy and easier to administer than price discrimination since it requires less consumer information and avoids legislation. Mixed bundling is more profitable if there is a negative correlation between the reservation prices of the two goods.

Adams and Yellen also discuss the normative consequences of bundling which, until their work, had been inadequately treated. Compared to perfect competition, commodity bundling leads to welfare losses. If components can in principle be disembodied from the bundle and sold, distributive inefficiency arises. It can also be shown that allocative inefficiency exists since goods may be either over or under supplied. Schmalensee (1982) shows that if a competitively available good is bundled with a monopoly good in a mixed fashion, then the competitive good is always oversupplied.

Bundling, therefore can, but does not necessarily, make society better off. It depends on the state of the market. If monopoly exists, mixed bundling is preferable, but in a competitive market, mixed bundling is not Pareto optimal.

Adams and Yellen's work is very helpful in a monopolist's decision of how to sell his goods - individually, in a bundle, or both. It also makes some useful conclusions about the normative consequences of commodity bundling. However, there are a number of limitations to its usefulness to the package tour industry. Firstly, monopoly power is assumed. Secondly, the analysis assumes away complementarity in consumption, economies of scale, transaction costs, and information costs, all of which play a large part in the consumer's decision to purchase a package tour.

Kenney (1979) has investigated a number of different situations where goods are sold in pre-packaged groups. The three examples he uses are motion pictures, oranges, and diamonds. He disagrees with Stigler's explanation for the block-booking of films, which is that the seller can take advantage of gains from trade. Instead he argues that films are sold in blocks to the exhibitors to reduce their uncertainty about the quality of the films and therefore their information costs. Another point he makes is that the pre-packaging of goods reduces the number of different items available, and thereby reduces selling and handling costs. His conclusion is that block-booking reduces the real cost of quality inspection by the buyer and so the gain can be shared by the buyer and the seller. The implication is that it creates a Pareto welfare improvement.

Kenney also concludes that other goods such as oranges and diamonds will be sold in packages and will lead to seller gain if:

- a) the goods are heterogeneous in quality
- b) units of different quality are substitutable in use
- c) buyers have fairly uniform tastes
- d) inspection is costly and the establishment of many product classes is costly
- e) buyers typically buy several units of the good at the same time.

There are some similarities between Kenney's analysis of films and the example of package tours. Most importantly, buyers in both cases are not able to determine the quality of the product costlessly, therefore the reputation of the company is important. There is also a tendency on the part of the consumer to search and waste resources by doing so.

There is however one crucial difference between the examples Kenney uses and some package tours. Kenney studied situations where the goods which are being packaged are homogeneous in nature (but not necessarily in quality). For example, he discusses the selling of a number of films together, a bag of oranges, and a package of diamonds. The tour package consists of heterogeneous products (hotel room, airfare, sightseeing etc.).

Kenney's rationale for pooling goods to save on search costs holds and is particularly applicable to the case of multi-destinational packages. An individual who wishes to visit a

number of different destinations will have fewer search costs by purchasing a package which includes those destinations, than by purchasing facilities in each destination separately. As with the bag of oranges, the consumer may still purchase the package even though he discards one or more items.

### 2.3 Conclusions from the Literature Review

This chapter has analyzed the literature on tour packaging and the theoretical economic literature on commodity bundling. The studies on package tours offered no further theoretical understanding of why tours are packaged, or why consumers choose a package tour over an individually organised one. It is clear therefore that more work is needed in this area.

The theoretical literature on commodity bundling was helpful to a degree. The following conclusions can be drawn from it.

- a) Most of the theory explaining full-line forcing, tie-in sales and commodity bundling assumes that the producer has monopoly power and wishes to extend it. For most tour operators this is not the case, since the market is usually competitive, as will be demonstrated later.
- b) Barzel's theories which explain some commodity bundling under competitive conditions offer the most help in

explaining tour packaging. He considers bundling under two conditions:

- where there is a fixed cost for access to the bundle but no marginal price for the use of the elements in the bundle. In this case substitutes will tend to be tied together to avoid excessive use of the products.
- where there is an attribute that is unpriced. By tying another good that is complementary to the unpriced attribute, excessive use is avoided.

In both of these cases, the bundling arrangement narrows the gap between valuation of the bundle and the cost of providing the bundle; therefore efficiency is increased. Barzel's findings will be incorporated into a theory which explains tour packaging.

- c) The motivation of evading price regulation (from the tie-in literature) has relevance to the tour industry, and examples have been given. This however does not explain the general phenomenon.
- d) Many of the works cited assume away a number of possible explanations for commodity bundling, many of which seem to apply to the package tour industry. These are economies of scale, complementarity in consumption, and information and

transaction costs.

Barzel acknowledges that transaction costs are an important reason for tying two or more goods.

Other than that, the major purpose of the works cited above is to show that commodity bundling can be profitable even though the above four conditions are not met. My analysis will attempt to combine these reasons into an integrated theory of package tours.

Kenney clearly addresses the issue of information and transaction costs, but applies it to quality searches among the same good.

- e) None of the studies addresses the issue of commodity bundling from the consumer's viewpoint. All the analysis focuses on whether or not the producer should bundle, why he does, and how he can maximise his profits by doing so.

## 2.4 Methodology

The purpose of this study is to develop a more comprehensive theory. It will analyze both the supply and the demand side of tour packaging. The supply side analysis will investigate the tour operator industry structure, to determine the nature of the industry. Ten tour operators in Hawaii were interviewed in depth. A sample of their tour brochures was analyzed for components and prices of the tours. The tour industry structure will also be analyzed using a micro-economic framework. The tour operator's decision of which components to include in a package will then be addressed. This analysis will use the consumer reservation price approach explained by Adams and Yellen (1976).

The demand side study will model the consumer's vacation mode choice. It will attempt to explain which factors cause an individual to purchase a package tour rather than arrange his vacation independently. A decision model will be developed based on McFadden's work on transportation mode choice. Data from Hawaii Visitors Bureau 1980 Expenditure Survey will be used to test the model. A binary logit model which uses the maximum likelihood estimation method will be used to predict the choice. Both logit and probit models are applicable when the dependent variable is binary. Logit is chosen rather than probit because it has been most commonly used in previous modal choice models. It is also preferable to probit because the

coefficients of the estimated equation are easier to interpret. The next chapter will describe and analyze the tour industry.

Footnotes

1. Kinberg and Sudit, "Tourism: Criteria for the Selection of an Efficient Bundle Mix and Allocation of Joint Revenues", Journal of International Business Studies, (Fall 1979), 51-63.
2. Ibid., p. 62.
3. Standard Oil Company of California vs. U.S., 337 U.S. 293, (1949), 305-6.
4. Kinberg and Sudit, op. cit., p. 62.
5. F. Supp., 1199 vol. 491 d. Hawaii 1980.
6. Barzel, Yoram, "Competitive Tying Arrangements: The Case of Medical Insurance," Economic Enquiry, xix (October 1981), p. 605.
7. Ibid., p. 606.
8. Some basic packages offered by suppliers may not offer this service, but basic packages offered by tour operators do have tour desks and escorts available for this information.

## CHAPTER THREE

### THE PACKAGE TOUR INDUSTRY

The purpose of this chapter is to investigate the structure of the package tour industry, to see whether monopoly power is present.

The package tour industry constitutes a major part of the tourism industry. The industry began in the mid-nineteenth century, when the first package tours were developed in 1841 by Thomas Cook in England. These tours differed from package tours of today. Their transportation was by railroad and they did not include accommodation. Instead the traveler was given a hotel coupon which he could use at any of 1200 hotels throughout Europe, and Thomas Cook would guarantee the payment (1). Packaged steamship tours also existed in the 1920's and 30's. Until after World War Two the growth of the industry was limited by a number of factors.

The market for package tours, or travel of any kind was small. Slow transportation times, high transportation costs and a lack of traveler comforts were partly responsible for this. The small size of the market did not support the volume required by tour operator companies. Poor communications also limited the information flow necessary for the efficient movement of people. It was not until

after the Second World War that large numbers of people could be carried over long distances relatively quickly and inexpensively. This provided the volume of travelers to support the package tour industry.

The travel industry continues to grow and diversify. Travel agents and tour operators have always been the most important elements in the tourism distribution channel. Now, however, specialized companies are taking over some of the package tour operator's functions. An example of such a company is the incentive travel company which specializes in selling tours and travel to companies who reward their sales staff with vacations. There are also companies which specialize in meetings and conventions and large one-time group sales. Travel clubs and non-profit organizations are becoming increasingly common in the travel business, by providing travel services for their members.

Despite the industry's diversity, the three most important entities remain the suppliers of the tour components, the tour wholesaler or operator, and the travel agent. Each will now be discussed separately and their roles will be clearly defined.

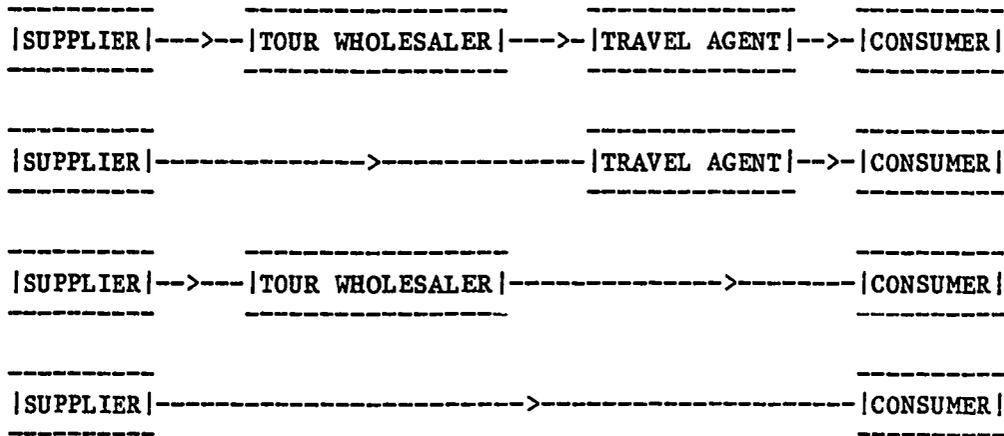
### 3.1 Industry Members

#### 3.1.1 Suppliers

The suppliers of the tourism product are the companies which produce the component parts of the vacation. Examples of suppliers are

hotels and other forms of accommodation, air and ground transportation, car rentals, restaurants, attractions and entertainment. They market their product either directly to the consumer, or indirectly through a travel agent or through a tour wholesaler. The possible distribution channels are shown in Figure 3.

Figure 3  
Distribution Channels of Package Tours



It is quite common for suppliers to have sales agents who sell to the retailer and wholesaler. Suppliers give commissions and discounts to intermediaries in the travel distribution channel for selling their product. Tour wholesalers are given volume discounts, and travel

agents receive commissions of 10-20% for selling the suppliers' products. Suppliers have an incentive to reduce the cost of inspection of their product by travel agents and tour operators. This is why they offer familiarization trips to assist buyers in their inspections.

It is in the suppliers' interests to sell products directly to the consumer to maximize revenue. If he sells through the travel agent he reduces his revenue by the amount of the commission, or if he sells through a tour packager, by the amount of the discount. Most hotel and airline reservations come through one of these intermediaries. A study by Touche Ross (1975) states that airlines have been reticent to enter the tour operator business because of adverse reaction by existing tour operators, lack of trained personnel, and legal and regulatory restrictions(2). The study also points out that, by entering the tour business, airlines could achieve higher utilization of their aircraft and add stability to the industry. The study suggests that they could also achieve better results from their promotional campaigns, and improve profits by reducing costs. This argument is not consistent with economic theory, and suggests that airlines would dominate the tour operator function. Since this is not the case, it is expected that the potential cost to the supplier of marketing his product himself is perceived to be greater than the revenue lost in commissions and discounts.

A possible explanation for the commission system is that marketing costs in the form of discounts and commissions are only incurred once the product is sold. Therefore large sums of money are not wasted on unproductive advertising. If marketing were to be done by the suppliers, similar expenditures may not guarantee the same number of sales. Another reason for allowing the travel agent to bear the risk of advertising is that he is more familiar with the local market. A travel agent's local advertising will be more effective than national advertising by the tour operator, since he understands the needs of the market better. A third explanation is that direct advertising affects the supply curve. It has the effect of shifting the supply curve up from  $S_0$  to  $S_1$ , since it increases the price of the good. Commissions also have this effect. Promotion has the effect of shifting the demand curve to the right from  $D_0$  to  $D_1$  by increasing the demand for the good. The commissions structure does not do this. Figure 4a shows the advertising effects, and Figure 4b shows the effect of commissions. Then a comparison of  $Q_0$  and  $Q_1$  will determine whether advertising or commissions are more effective. This depends on the demand elasticity.

Figure 4a

Effect of Advertising

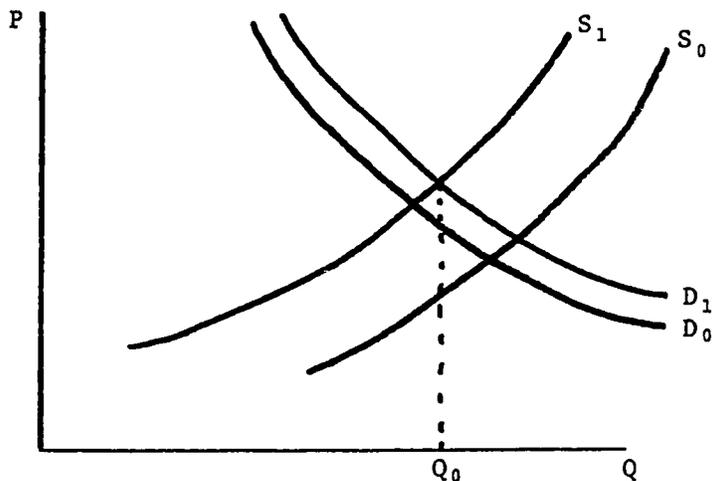
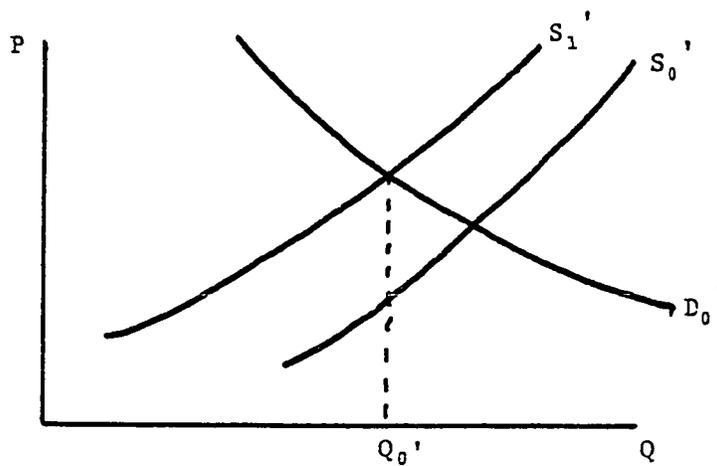


Figure 4b

Effect of Commissions



From the consumer's viewpoint, transaction and information costs are reduced by going through an intermediary because tourism products are usually purchased in conjunction with others and would require many transactions. Similarly, transaction and information costs for the travel agent are reduced by booking through a tour operator.

The deregulation of the airline industry in 1978 has had some impact on package tours. Since deregulation, prices are less stable and tour operators are not willing to commit themselves to a particular price in the brochure. Therefore most tour operators price the tour without airfare and then give 'average' airfares in the brochures as information for the consumer. One tour operator interviewed has two people on its staff whose sole job is to keep track of airfares(3). Tour operators with very large volume may have contracts with the airlines that keep prices steady and lower than retail.

Suppliers, therefore, have three ways of selling their product: directly to the consumer, to the travel agent who then sells to the consumer, or to the tour operator who then sells to the travel agent or to the consumer.

### 3.1.2. Tour Operator

The tour operator acts as a wholesaler in the distribution of the tourism product. He is the intermediary between the suppliers and the

travel agent. The terms "tour operator" and "tour wholesaler" are often used interchangeably, however there is a slight distinction. The tour wholesaler does not retail tours and is less likely to provide services at the destination (4). The term tour operator will be used throughout this paper; however, many of the theories discussed also apply to the tour wholesaler since they are so similar. The tour packages that the tour operator creates are somewhat standardized and assume some convergence of consumer tastes. This convergence of tastes allows the tour operator to experience economies of scale and obtain volume discounts with suppliers.

The United States Tour Operators Association (USTOA) is a trade association of which firms may become members. The association has certain ethical standards, and only 28 of the 600 firms in the United States are members.

The contract between the tour operator and the supplier can be of two different types. The tour operator can either make block reservations or block purchases with suppliers. In the former, the tour operator is able to reduce financial risk by sharing it with the supplier, since only the units that are used are paid for. In the latter case of block purchases the tour operator commits himself to purchase a certain number of units whether or not he is able to sell them. An example of this is the chartering of an aircraft. The relative market power of the tour operator and supplier will determine which of these two options is taken.

With block reservations, the tour operator reserves with the supplier approximately the number of units that he expects to use for a given time period in the future. Negotiations are usually done for a year - the period for which brochures are printed. The negotiated rates are, like the type of contract, dependent on suppliers' expected occupancy or usage rates, on the expected general business and economic conditions, and on the tour operator's expected volume. An industry practice is to estimate tour operator's future volume based on utilization rates of the previous year. For example, if 200 hotel rooms had been block booked and only 60% used throughout 1983, the rates for 1984 will reflect this under-utilisation and will be discounted less. Financial stability of the company, and marketing plans are also considered in estimating future volume.

Negotiated rates are tightly held secrets in the industry, and standard group rates are the exception rather than the norm. Therefore very little information is available on actual rates. Discounts appear to vary from 10% (minimum travel agent commission) to over 50%. A price analysis of tours will follow in the next chapter to more clearly understand discount rates. It is suspected that without discounts of 50% or more, the price of some tours could not be maintained.

The tour operator reduces his financial risk in the following way. Payment is received from clients (via travel agents) approximately 35 days before the tour date. Thirty days before the

tour date the tour operator must notify the supplier of the number of units required. The supplier is then free to resell any unused units that had previously been blocked out for the tour operator. In this way the supplier now shoulders some of the risk since some sales may have been lost while the units were block booked. This may mean that some of his sales, after the tour operator has cancelled, are at a lower price. Some consumers may also be inconvenienced by block booking if they find the facility is fully booked. Airlines compensate for this by overbooking their planes.

Elaborate cancellation policies are developed by tour operators to guard against financial loss. Tour operators are also required to maintain a depository trust account to protect consumer deposits and payments. Since deposits and payment come in before the tour date and payment to suppliers is not usually required until after the tour date, the tour operator has a large cash float to work with.

A block purchase is a less common type of contract, but is sometimes found, especially with the airlines. In this case a tour operator commits himself to purchase a certain number of airline seats, and is committed to pay the supplier even though they are not filled. The price is usually much less than with block reservations, reflecting the transfer of risk from the supplier to the tour operator. The supplier is in a much stronger bargaining position when this type of contract is used. There are, very often, fewer airlines flying a certain route than there are hotels at a destination,

therefore this gives them the market power to negotiate block purchases. If the supplier is in a position to force the sale, the price will be higher rather than discounted. In this type of contract the tour operator actually owns and has title to the product which he is selling. This is not true for block reservations. Tour operators who are confident of selling adequate volume, most often the larger companies, will be more likely to accept this type of contract. This could be because for a large operator, the financial risk and loss is smaller since he has large volume. This is similar to the example of rental apartments that are owned as whole buildings as opposed to individually owned apartments.

In either case, the tour operator's main selling aid is the brochure. The tour operator is responsible for printing a brochure describing his tours. The supplier's name (especially the airline) is often displayed on the brochure. These brochures are then sent to the travel agents and distributed to consumers. The way in which information is presented in a brochure has been the subject of controversy, regulation and some court cases. Some brochures are merely factual with listings of tours, but most are lavish with poetic descriptions of the destination.

The ethics of the industry require that the brochure information be accurate and complete. The CAB, in an attempt to protect the consumer and standardize the brochures, must approve any promotional material before it is distributed(5). Brochures constitute between 2

and 5% of the total tour price. A conversion rate of one booking to 8 to 10 brochures is accepted as the industry norm (6). There are economic incentives for the tour operator to over-represent the quality of his product in the brochure. Repeat business, however, will be severely limited if deception is used. Klein and Leffler (1981) discuss the types of industries in which 'deception' is more likely to occur. Industries with non-salvageable capital have incentives to provide the quality which is expected, since if repeat business is lacking, their exit from the industry is not costless. Since the tour operator industry has almost no non-salvageable capital, there may be incentives to mislead the consumer. This could explain the perceived demand for regulation. Any advertising done by the tour operator generates goodwill. This goodwill is non-salvageable and will produce a future stream of income. Therefore if there have been large investments in advertising, exit from the industry will not be costless and the company will be less likely to mislead the consumer.

Klein and Leffler also state that quality cheating problems are more prevalent when the quality of the good cannot be detected before purchase (7). This is true for travel and tourism because travel is principally a search good rather than an experience good. This is an additional explanation for brochure over-representation. The USTOA advises its members against such over-representation:

"By providing straightforward and realistic information to travel agents and consumers alike, the tour operator fulfills a responsibility as important and critical as assembling the tour package."

(8).

In addition, the OECD has recommended that governments improve the protection of the tourist, and the quality of information on package tours. It suggests that all brochures include the legal identity of the tour operator, destination and itinerary, means of travel, total price with services included, accomodation quality, booking procedures and cancellation policies (9). A traveler has the right, under the Code of Federal Regulations, to rescind his contract and get a full refund for any of the following reasons: if there is a 48 hour delay in departure time, a change in origin or destination, a hotel substitution, or a price increase of more than 10% (10).

Dickerson states that there is more evidence of fraud and negligence in the middlemen than any others in the travel industry (11). In October of 1983 the International Bar Association established an international watchdog committee on travel and tourism law. It was felt that traditional concepts of law were not always satisfactory in dealing with tourism problems. The committee will look into the rights and duties of hoteliers, tour operators, travel agents and transport operators, travel contracts, consumer protection and insurance affecting tourism, air fare and air charter regulations including antitrust, and government regulations(12).

A special type of tour operator is the ground operator. The ground operator specializes in coordinating activities and tours at a destination. He is not concerned with travel to the destination, but customizes ground tours for group travel. A tour operator may contract out the ground services of a package to a ground operator. This is uncommon except for companies with small volume, possibly because it is more difficult for the tour operator to maintain quality over the vacation. There are also transaction costs involved in dealing with the ground operator.

In conclusion, the tour operator's role can be summarized as minimizing information and transaction costs for the travel agent and the consumer, and reducing promotional costs for the suppliers, while himself making a profit. This is accomplished by selecting component parts of a vacation and selling them as a package.

### 3.1.3 Travel Agent

The travel agent is the retailer of the tourism product, and is the link between the consumer and the tour operator, and the consumer and the suppliers. In the United States in 1982 there were approximately 20,000 conference appointed travel agencies. Travel agents are paid on a commission basis, which can vary from 10% to a maximum of 20% according to the product and volume sold. The commission is a variable cost to the tour operator or supplier since it is only paid on actual units sold. As an example of the volume of

commissions in United States, a major national tour operator paid out \$14 million in commissions to travel agents in 1982. In 1982, travel agents booked 90% of all package tours sold. Travel agents deal mostly with outbound travel whereas tour operators deal mostly with inbound travel.

A survey of fifty top travel executives predicted that the present set commission basis will not be appropriate by 1985. Instead there will be two types of travel service vendors - those dealing with high volume travel and those who provide more of an advisory service. Each type will get different commission rates(13). All airlines used to give standard commission rates, however since deregulation they are now at the discretion of each airline. Travel agents are responsible for booking and ticketing more than 50% of airlines' business.

Most travel agents are certified by the Institute of Certified Travel Agents or the American Society of Travel Agents. Both of these agencies have a code of ethics and financial requirements for their members. State governments often regulate the industry also. In Hawaii, any travel intermediary must make a one-time payment of \$50 into a recovery fund. This fund is used to pay any damages that may occur due to problems with bookings. If it ever goes below \$30,000 the payment is reassessed (15). The company responsible for the damage is then prevented from doing further business until the full amount is repaid into the fund with 10% interest. In addition, the CAB and IATA used to require that an agent be accredited by a trade

organization to sell airline tickets. This restriction has been relaxed somewhat and since the beginning of 1983, travel agents no longer have exclusivity of selling online air tickets. This means that anyone can now sell air tickets for a journey on one carrier (online). If the journey requires two or more airlines (interline), certified travel agents retain their exclusivity. This is subject to change in December 1984 when the CAB will reconsider the issue(16).

The role of the travel agent is to provide information and advice to the consumer, to make reservations with suppliers and tour operators, and to prepare documentation. The travel agent therefore shoulders few risks in the sale of tourism products. The agent also plays no part in pricing and product decisions of a particular tour operator(17). In many other forms of retailing, the retailer can vary the selling price. This is rarely done by the travel agent, even though commissions could be shared with the consumer by offering lower prices.

Since the service of a travel agent is free to the consumer, there is no incentive to curtail use except for the time cost to the consumer. The travel agency is like a store of travel products. The consumer expects to be able to 'inspect' the goods in the store, by reading available brochures or to converse with the agent. If the consumer were to pay for this service, the distribution channel structure would probably change. The consumer would purchase more products directly through the supplier or tour operator until

information and transaction costs exceeded the charge for the travel agent service. A cross-subsidization now exists between those who use travel agent services and those who do not. When consumers have to pay for this service, it is expected that prices of goods from suppliers will decline. Only those consumers who value the counseling advice would pay to use the travel agent.

Much of a travel agent's time is spent in unprofitable counseling. Consumers have a tendency to overuse these free information services. This is an example of the free-rider problem where the consumer is free-riding on travel agent's information services. If the travel agent had a way of telling who the free-riders were then his services could be modified accordingly. The travel agents unprofitable counselling is balanced by the simple and quick ticket writing for expensive journeys or vacations. For example, a traveller who wants to fly from Honolulu to London and stay at the Dorchester Hotel for three nights, will bring the travel agent approximately \$300 (.10 x \$3000) in commission for the minimal activity of making two phone calls or telex messages.

Suppliers wish to have their products well represented even though it has yet to be demonstrated that travel agents have a significant impact on the consumer's decision making process. In addition to providing brochures, they invite agents to experience their product by partaking of familiarization trips at minimal or no charge.

The travel agent, however, is a profit maximiser and will want to sell goods which bring most revenue for the least cost, while at the same time satisfying the consumer. Since the travel agent is paid on a commission basis, there will be a tendency to favor higher priced items. If a package tour is sold to a consumer, cost is minimized and approximately the same revenue is received as if components were sold separately. Therefore it is in the agent's interest to sell packages rather than individual components. The agent's reputation is then in the hands of the tour operator. Since travel agents thrive on repeat business, it is in their best interests to sell tours that provide best value. The USTOA recognises this fact:

"...the duties of a retail travel agent and his profit objectives are complementary, as profits can be achieved on a continuing basis only if the agent acts in the best interest of both the client and the tour operator." (18)

The travel agent deals mostly with individual travel and designs vacations to suit the consumers' needs. Unlike the tour operator, the travel agent does not depend on taste standardization. Small groups may ask an agent to prepare a tour for them, but the agent's buying power is not as great as tour operators, therefore the tour will tend to be more expensive. Travel agents sometimes act as tour operators but only in a limited way.

### 3.2. Tour Operator Industry Structure

The industry structure of tour operators in the United States will now be examined, using Hawaii as a case example. Much of the economic literature on packaging goods is based on the assumption of monopoly. Therefore it is necessary to determine the nature of the tour packaging market.

In 1974 there were 350 tour operators in the United States. Most of these were independently owned and had been in existence for more than ten years. In 1984 there were 653 companies in United States who sold package tours. This included tour operators and wholesalers, and hotel companies who create their own packages (19). A study of tour operators by Touche Ross (1975) based on a sample of 56 tour operators analyzes the industry. The results show that 3% of the firms account for 30% of the revenue and 37% (1 million) of the passengers. Therefore the industry is highly concentrated. Tables 1 and 2 show a breakdown of the size of these tour operators:

Table 1

Number and Size of Tour Operators in United States.

Number of passengers moved	Average number of employees	Percent of tour operators in sample.
1 - 5,000	6	41%
5001 - 25,000	30	38%
25,001 - 50,000	59	12%
50,001 - 100,000	68	6%
100,000 +	241	3%

Source: "Tour Wholesaler Industry Study", Touche Ross, 1975,  
Exhibit 2.

Table 2

Revenue of Tour Producers in United States.

Tour Producer	Passengers served	Revenue	%
Independent tour	2.7 million (52%)	\$2.1 bill	52%
Airlines	1.1 million (21%)	\$0.9 bill	23%
Retail Travel Agents	1.4 million (27%)	\$1.0 bill	25%
TOTAL	5.2 million (100%)	\$4.0 bill	100%

Source: "Tour Wholesaler Industry Study", Touche Ross, 1975,

Exhibit 5.

The Touche Ross study also reports that in 1973 package tours were sold to 5.2 million tourists and generated \$4 billion in sales. 86% of this revenue was for direct costs to suppliers and 14% represented indirect costs. Table 3 shows these indirect costs

Table 3

Breakdown of Indirect Costs of Tour Operators.

Function	Percent of costs
Reservations, recordkeeping and accounting	25%
Tour preparation	22%
Net literature production and printing (net of reimbursements)	15%
Promotion	12%
Public Relations	2%
Miscellaneous	12%

Source: "Tour Wholesaler Industry Study", Touche Ross, 1975.

Direct costs with suppliers reflect scale economies due to volume as already discussed. Table 4 shows that indirect costs (as outlined above) also demonstrate scale economies.

Table 4

Economies of Scale of Tour Operators.

	Market share	Average cost of operation per pass.
Operators with 1 - 5000 passengers annually.	3%	\$64.3
Operators with 5,000 - 50,000 passengers annually	29%	\$53.50
Operators with more than 50,000 passengers annually.	68%	\$33.90

Source: Tour Wholesaler Industry Study, Touche Ross, Exhibit 14.

The average cost function for a tour operator company can be divided into two parts:

1. the average cost of the tour components from the suppliers ( $AC_c$ ).
2. the average operating and managerial costs of the company ( $AC_m$ ).

Components costs,  $AC_c$ , decline with volume as suppliers give discounts which are approximately proportional to volume(20). The

Touche Ross study estimated these costs to be 86% of a tour operator's total costs. This average cost curve is a rectangular hyperbola.

Basic tours consist primarily of airfare and accommodation which are both capital intensive components. Such capital intensive components have high fixed costs and low variable costs. Therefore it is expected that price flexibility and price discounting will be more common, since the seller can lower the price to variable cost. This is one reason why basic tours reflect higher price discounts for consumers. Another reason is that it is easier for a consumer to find and compare the prices of many hotels and airlines than it is for other components such as activities at the destination. Therefore basic tours which have lower transaction costs for the consumer will be discounted more than tours which include sightseeing activities (21). It will be shown in the next chapter that more consumers purchase basic tours than inclusive tours. The greater volume enables tour operators to receive larger discounts with suppliers, which they can pass along to the consumer. Inclusive tours which include many components with high variable costs will be less likely to reflect high discounts.

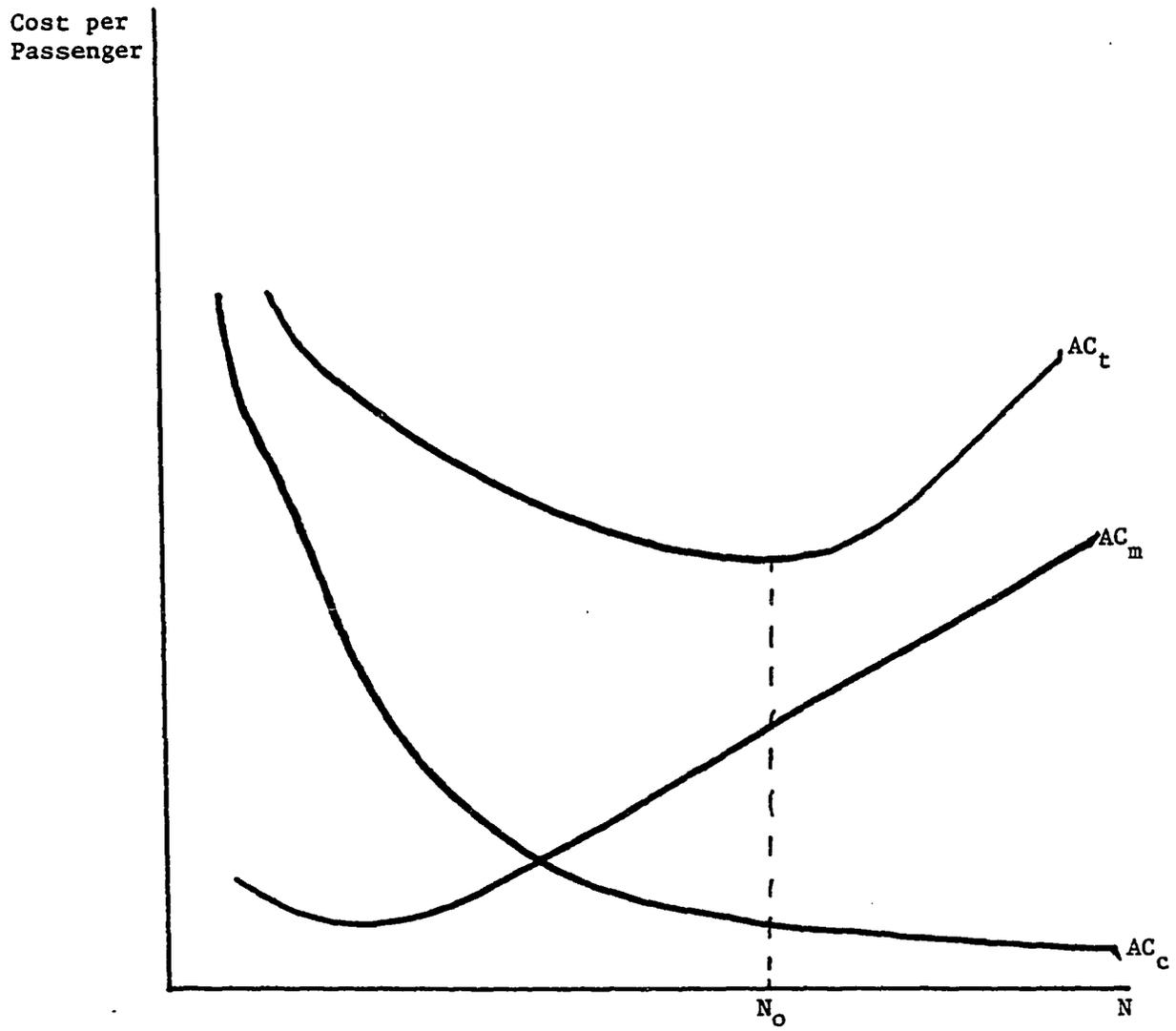
Managerial costs,  $AC_m$ , are expected to decrease initially, and then increase with volume. As the tour operator has increasingly large volumes of passengers, the average operating costs will first decrease, and then are likely to increase. Total costs increase as more skilled staff and more complex operating procedures are necessary

to deal with very large volumes. This could also lead to increased average costs. Also, as tours with different destinations are added, information costs for the company are much higher. The Touche Ross study estimated these costs to be 14% of the total costs.

The two cost curves,  $AC_c$  and  $AC_m$ , and their sum  $AC_t$ , are shown in Figure 5 .

Figure 5

Average Cost Curves for Tour Operators



The average total cost curve for a tour company,  $AC_c$ , does not appear to constantly decrease. Instead, it reaches a minimum and increases thereafter. The minimum point,  $N_0$ , is the optimal size of the firm, where the costs are the least. From the Touche Ross information displayed in Table 4 it appears that the optimal size (in terms of least cost) is greater than 50,000 passengers per year, since indirect costs were shown to decrease up until that size. It is not possible, from the available information, to determine how much greater than 50,000 the optimal size is.

Friedman explains that firms will tend to be of different sizes in industries which have some specialized factors (22). There will not be an optimum sized firm, but instead an optimum distribution of firm size. A specialized factor is one that cannot easily be duplicated. The knowledge of different destinations and their facilities, and the ability to negotiate, may create this specialized factor for tour operators. Even though some tour operators may appear to be making positive profits, these profits are actually rents for the specialized factor.

Given a certain size market, the optimal size (or optimum distribution) of firms also implies an optimal number of firms. Since the optimal size appears to be large, it is expected that there are relatively few firms.

The nature of the industry will now be analyzed in more detail. The industry appears to fit Baumol's description of a contestable market. A perfectly contestable market has four major characteristics(23):

1. Entry is free and exit is costless.
2. Economic profits are zero or negative.
3. There is no inefficiency in production, since unnecessary cost invites entry.
4. The product cannot be sold at a price where price is less than marginal cost. If price is greater than marginal cost there is a chance for hit-and-run entry.  
(Hit-and-run entry refers to companies who enter and exit the market very quickly).

Unlike monopolistic or competitive situations, a contestable market is not dependent on the number of firms. There may be few or many, but if the necessary characteristics are displayed it will be contestable. Each of these characteristics will now be discussed with relevance to the tour operator industry.

The first characteristic appears to be true. The tour operator market is characterized by easy entry and easy exit. A tour operator requires little or no capital outlay to enter the business. Some knowledge of the destinations and the ability to negotiate are all that is required. The operator needs to generate volume to stay in business, and receive volume discounts from suppliers. If this is not

possible, exit market is easy, quick and almost costless. Firms which have advertised extensively will be less likely to exit quickly because of the potential goodwill generated by the advertising. Otherwise, there is little to deter firms from fast exit from the industry. There are examples of hit-and-run entry which have left the consumer stranded (24). Consequently, experienced travel agents depend on approximately forty of the major tour operators even though there are over five hundred in the industry (25). This reflects an awareness that many of the firms are not stable and may not be around for long. The use of information technology can make exit from the industry more costly. To the degree that the technology is designed specifically for the tour operator industry (especially software), this constitutes an additional cost to exiting the industry. Therefore technology may have the effect of making the industry less contestable.

The second characteristic of a contestable market was unable to be verified because profitability data were unavailable. The discussion above, however, reveals that if economic profits were being made in the short run, new firms could easily enter. This would cause industry profits to reach zero in the long run, and so the second characteristic of a contestable market is probably verified.

The third characteristic of the contestable market is interesting when applied to the tour industry. In the tour operator business, there is little room for inefficiency, since the major functions of

the operator are to locate information and to negotiate contracts with suppliers. Even if the operator is inefficient in negotiating, the maximum that will be paid for tour components is the retail price. Many tours are sold above the equivalent retail price. Inefficiency at the level of locating and processing information may become an important factor, since the use of information technology is increasingly common in tour operator firms. Its use, of course, increases the efficiency of the information processing function.

As a test of the fourth characteristic, a price analysis was performed. The tour operator industry in Hawaii is used as a case example of the U.S. industry in general. In some ways Hawaii's tour operator industry is typical of the U.S. as a whole; however it is also more developed and more established than most, since Hawaii is such a major resort destination. It is also unique since all visitors must travel by air rather than drive (as is possible in Europe and in the contiguous United States) and so are more likely to purchase a tour package. This is because they must purchase some form of transportation. Transaction and information costs are also higher for geographically isolated destinations, and so the consumer is less likely to travel independently.

In Hawaii there are at least ten tour operators(26). There is some evidence of vertical integration in the tour industry as will be demonstrated by the description of eight of Hawaii's tour packaging companies which follows(27).

#### Pleasant Hawaiian Holidays

This company is the largest tour operator in Hawaii. It brings into the islands approximately 250,000 visitors per year. Hawaii is the main destination it serves. Pleasant Hawaiian has a contract with American Express to perform all its marketing activities from U.S. and Europe. Pleasant Hawaiian owns three hotels, and contracts with a total of 35 hotels. One of the major carriers to Hawaii has a contract with Pleasant Hawaiian; they also charter flights from Transamerica Airlines. Pleasant Hawaiian offers mostly basic and intermediate tours, only a few of which are escorted. Independent tours which a tourist puts together himself are also offered.

#### Tradewind Tours

Tradewind Tours is a large international tour company which also serves Hawaii. It is affiliated through part-ownership with many tourism companies such as InterIsland Resorts, Outrigger Hotels, Grayline Rent-a-Car, Hawaiian Cruises and night event companies. Tradewind Tours offers basic and intermediate tours, special honeymoon packages and independent customised vacations. They make block purchases with the major carriers to Hawaii, and so their packages include airfares.

#### First Family of Travel

This company is a worldwide conglomerate of tour companies, including some special interest tour companies. In Hawaii, member

companies are Hawaii Leisure, Aloha Hawaii Travel, Hawaiian Holiday Tours, Mackenzie Travel Organisation of Hawaii (deluxe tours), Roberts Tours of Hawaii(ground operator) and Condo Resorts International (condominium packages). All types of tours are available from this conglomerate.

#### Island Holidays

This company is a subsidiary of the Hawaii conglomerate Amfac which also owns many hotels in Hawaii. They offer all types of packages including special interest and independent customised vacations. Their tours do not include airfare.

#### Cartan Tours

This is a national company with an office in Hawaii. It appears to have no affiliations with other companies. They offer a range of tours from deluxe, escorted to basic packages. Their tours do not include airfare.

#### Tauck Tours

This is a national company offering only one tour to Hawaii. This tour is deluxe and escorted. They own their own buses which are specially equipped with luxury features. Their tours do not include airfare.

#### Fun Sun Hawaii

This company offers basic, budget packages to Hawaii from Canada. Airfare is included, and accommodation is with a hotel which is leased by Fun Sun.

#### Hickory Tours Hawaii

This company grew out of a travel agency company and sells tours to Hawaii in Alaska.

The package tours of these companies will now be analyzed to determine the structure of the industry. First of all a price analysis will be done. To do this price analysis, a representative sample of tours was taken from the brochures of these companies. The tours were divided into three categories: all-inclusive, intermediate and basic tours. The tour price was then compared to the equivalent retail cost (ERC) of the tour components. The ERC reflects what the consumer would have to pay for the same vacation if the components were purchased separately in the retail market(28). The ERC was estimated for this analysis by telephone conversations with retail travel agents and retail tour desks to obtain the retail price of the components. In addition, local tourist literature and newspapers were used to determine the individual retail costs (29). Wherever possible the exact same product and quality was used in the calculation of the ERC as was in the tour. The lowest price for that component was used to calculate ERC. There are however some instances where this is impossible.

The quality of components offered as part of a tour often differs from their quality when sold separately in the retail market. The quality may be either inferior or superior, depending on the bargaining power of the tour operator versus that of the supplier. An example of a tour component being superior is Tauck's deluxe tour which has specially equipped luxury buses that the consumer could not purchase otherwise. Some tours include special services in the hotel

rooms. Others have service which is inferior to that for individual hotel guests.

Tables 5, 6 and 7 show the results of this price analysis. A complete breakdown of the tour costs is given in Appendices A, B and C.

Table 5

Comparison of tour price and equivalent retail cost for basic tours			
	<u>Tour Price</u>	<u>Equivalent Retail Cost</u>	Percent Discount
<u>BASIC TOURS</u>			
1. Company B - 10 nights	679	807	16
2. Company B - 9 nights	714	805	11
3. Company A - 7 nights	379	441	14
4. Company B - 7 nights	409	485	15
5. Company C - 7 nights	564	641	12
6. Company D - 7 nights	469	603	22
7. Company D - 7 nights	539	662	19
8. Company E - 7 nights	480	525	9
Mean Discount = 14.75%; Standard deviation = 4.26			

Table 6

Comparison of tour price and equivalent retail costs for intermediate tours.			
	<u>Tour Price</u>	<u>Equivalent Retail Cost</u>	Percent Discount
1. Company B - 14 nights	829	816	- 2
2. Company C - 12 nights	1341	1224	- 9.5
3. Company F - 10 nights	1085	1000	- 8.5
4. Company C - 10 nights	1101	1187	+ 8
5. Company G - 7 nights	899	831	- 8
Mean premium = 4%; Standard deviation = 7.3			

Table 7

Comparison of tour price and equivalent retail costs for inclusive tours.			
	Tour Price	ERC	Percent Discount
1. Company H - 13 nights	2141	2254	+ 8*
2. Company C - 12 nights	1695	1599	- 6
3. Company F - 10 nights	1325	1309	- 1
4. Company F - 10 nights	945	855	- 10
5. Company F - 7 nights	995	904	- 10

Mean premium = 5%; Standard deviation = 8.85

\* This tour has a much higher and more consistent volume than other inclusive tours, partly because the company only offers one tour.

Table 5 showed that the selling price of the basic package is less than the sum of the retail prices of the component parts. This demonstrates that some of the volume discounts are being passed along to the consumer.

Tables 6 and 7 show that for the intermediate and inclusive tours the tour price is slightly higher than the equivalent retail cost in some cases. This could be because any escorting or guiding services were not included due to estimation difficulties. If they were included, the ERC would be higher than the tour price. Therefore the retail cost may be under-estimated. Inclusive and intermediate tours contain more components and services, and so the transaction costs to the consumer of arranging and participating in such a vacation individually are higher. He may therefore be willing to pay a premium for that service. Also the tour operator is able to charge for the service of reducing information and transaction costs for the consumer.

The Touche Ross study showed that consumers believed tours to be cheaper than the equivalent retail cost in 56% of the cases (30). For basic tours the percentage was higher at 70%. For inclusive tours, only 48% felt it was cheaper. Since tour operators were unwilling to provide cost figures, the marginal cost of an additional tour could not be directly compared to the tour price. (The upper limit to

marginal cost is the equivalent retail cost of the components). The fourth characteristic of a perfectly contestable market therefore could not be verified from the available information.

It appears from the above discussion that the tour operator industry displays most of the characteristics of a contestable market. There may be some market power in the industry due to information about specific destinations or facilities, but the industry does not appear to have as much market power as those used to explain the traditional reasons for the joint selling of goods. The increased use of information technology and high expenditures on advertising is expected to make the industry less contestable in the future. Therefore the traditional rationale for selling goods in packages (to extract monopoly profits) is not as applicable to the tour industry as to those industries discussed in the monopoly extension literature.

### Footnotes

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2. Touche Ross, Tour Wholesaler Industry Study, New York, (1975), p.9.
3. Interview with Sheila Geib, Island Holidays, Honolulu, October 1983.
4. United States Tour Operators Association, Ethics in the US Tour Operations: Standards for Integrity, (1982), p.16.
5. Dickerson, Travel Law, Law Journal Seminars Press: New York, (1983), p.5.10.
6. "Issues in the News," International Tourism Quarterly, 4 (1974), p. 6.
7. Klein and Leffler, "The Role of Market Forces in Assuming Contractual Performance," Journal of Political Economy, 89 (1981), p. 624.
8. Touche Ross, Op. Cit.

9. "Issues in the News," International Tourism Quarterly, no.1, 1980,  
p.2.
10. 14 Code of Federal Regulations, #380.33.
11. Dickerson, Op. Cit., p.5.7.
12. "Issues in the News," International Tourism Quarterly, no.3, 1983,  
p.5.
13. Ibid., p.1.
14. Hamilton, p.14.
15. Dept. of Commerce and Consumer Affairs, State of Hawaii.
16. Civil Aeronautics Board, CAB News, Washington D.C., December 17,  
1982.
17. However, each travel agent is somewhat limited in the number of  
products or tours he can represent, therefore he does make the  
decision of whether to carry a product or not, just as any  
retailer does.
18. United States Tour Operator Association, op. cit., p. 9.
19. "The Spring/Summer 1984 Retail Merchandise Mart", Travel Weekly,  
February 29, 43, (1984), 19.

20. It is possible for average component costs to increase for very large groups. These sized groups, however, usually deal directly with suppliers and do not purchase package tours.
21. If a travel agent is used to purchase a package tour or an independent vacation, the transaction costs to him are almost the same in each case. In each case he informs the travel agent of his vacation needs and the travel agent either books a tour or makes the reservations himself. In the latter case the consumer may have slightly higher transaction costs in the form of more 'hassle' (waiting, telephone calls, etc.)
22. Friedman, Milton, "Comment", in Business Concentration and Price Policy, Princeton, (1955), pp.230-238.
23. Baumol, William J., "Contestable Markets: An Uprising in the Theory of Industry Structure", American Economic Review, 72, (March 1982), pp 1-15.
24. Waters, Somerset R., The Big Picture, 28, (1984), p. 106.
25. Ibid.
26. The Hawaii market has had many small tour operators coming into business and then failing quite rapidly. Therefore an exact count

is difficult. The recession in the mid 1970's also saw some larger tour operators collapse.

27. These companies handle westbound tourists to Hawaii only. There are a few companies that specialize in eastbound visitors especially from Japan. This market will not be included in this thesis because cultural differences make the consumer's choice set very different.
28. An estimation of information and transaction costs was not included in the equivalent retail cost. Only the direct components of the tour were estimated.
29. HVB Member Hotel Guide, 1983, and other publications such as On the Go in Hawaii, This Week, Waikiki Beach Press.
30. Touche Ross, op.cit., p.7.

## CHAPTER FOUR

### A THEORY OF PACKAGE TOURS

This chapter will develop a theory of package tours. The majority of the analysis will relate to tour packaging where there is no monopoly power, however monopoly conditions will also be discussed. The producer's decision of what to include in a package will be analysed.

#### 4.1 Tour Packaging under Competition.

In the absence of monopoly power, it is observed that many types of packages are offered. Packages range from basic to all-inclusive. Basic tours include only transportation and accomodation. These are often created and sold by suppliers without the use of a tour operator. The packages are sold through travel agents and include no ground tours or entertainment. These types of packages proliferate when load factors and occupancy rates of suppliers are low, or when competition is very strong. The economic explanation for this is price discrimination. The creation of these packages offers the products to the consumer at a lower price for those with lower reservation prices. The products are also sold separately at a higher

price to those consumers with high reservation prices for that good. Or, alternatively, the price discrimination will sort out those consumers who do not wish to stay in the type of hotel that is connected to the package. Often the hotel is of low quality, and so high income consumers will purchase the components separately so that they may stay at the hotel of their choice. The lower income consumer with lower reservation prices may not take the vacation without the package. Strong competition among Hawaii's interisland carriers has led the airlines to create many of these basic packages, some of which offer a choice of hotel qualities.

Tour operators also offer basic tours, but typically they include little more than air travel and accommodation. The package with the fewest components offered by a tour operator to Hawaii includes airport lei greeting, transfer to hotels, and a briefing breakfast. Often a travel bag, souvenir album or other small article is included. Since basic tours are not escorted, and do not include scheduled events, departures are possible at any time, and the vacation can be of any length.

Intermediate tours include more components than the basic accommodation and air transportation. Some sightseeing trips, other destinations, some meals and car rental are examples of components that might be added. These tours usually have scheduled departures and are for a definite time period even though additional nights may

be purchased. They are usually unescorted. These tours lie between the basic tour and the all-inclusive tour.

The all-inclusive tour is a complete package. It includes accommodation, transportation, entertainment and attractions, all meals and tips, and often more than one destination. Personal shopping, extra service in hotels and tips to tour guides are not included. In this type of tour, departures are predetermined and travellers travel as a group. Their itinerary for the vacation is the same and the tour, which is of a predetermined length, is often escorted. Some ski vacation packages and cruises are examples of these intermediate tours. This type of tour depends most heavily on the convergence of consumers' taste. Taste convergence is a sufficient, but not a necessary condition for tour packaging. It also requires the most expertise on the part of the tour operator - firstly to determine what to include and secondly to negotiate with suppliers and to coordinate the group movements. As was demonstrated in Chapter 3 economies of scale are smaller and a premium over the equivalent retail costs is paid.

The tour operator must determine the best types of tours to package, and how many components to include. A component refers to any additional element such as meals or an excursion or attraction at the destination, or even another destination. In the analysis that follows, it is assumed that accommodation and transportation will always be included since in all cases they are perfect complements.

Travellers who do not see them as such will purchase one or the other separately and will not be interested in a package tour.

Adams and Yellen analyse the bundling decision in terms of consumer reservation prices. I shall use a similar framework, but develop and extend it to explain bundling under competitive conditions. The analysis that follows is applicable to any bundling situation, not only the package tour.

A consumer will purchase the bundle, a tour package, if his reservation price for the tour is greater than or equal to the price of the tour. A consumer's reservation price for a component depends on the degree to which the component is complementary to the rest of the tour. This complementarity will differ for different individuals and for different tours. In some cases components may be substitutes for everyone - particularly in the all-inclusive tour. For example, a tour which includes an all day excursion may also provide all meals. In this case, if the excursion is taken, the hotel meal cannot be consumed, and so the two will be substitutes for all consumers. The inclusion of substitutes affects the consumer at two points in time: firstly, in his decision to purchase the tour, and secondly in his decision of which components to consume once he has purchased and is on the tour.

Consider the purchasing decision first of all. He will purchase the tour so long as his reservation price for those components which he expects to consume is greater than or equal to the tour price.

Since many features of the destination and the components are unknown to them, some consumers may perceive additional utility in keeping their options open. For example, before consuming the tour, he does not know if he will like the meals, or whether he will want to take the excursions. Once he arrives at the destination he is more informed and can make a better choice. The inclusion of substitutes therefore could add utility for the consumer by keeping his options open. Alternatively, if the consumer is risk averse, he may prefer to have the security of knowing what his vacation is before he leaves.

Now consider the consumer who has purchased the tour and is deciding which components to consume. Since both the meal and the excursion are included in the package price and conflict in time, they are substitutes for everyone. The consumer will take the excursion if the utility gained from it is greater than the utility loss from not eating the meal, and vice versa. Since the tour is already pre-paid, his decision will be based on utility and not on price.

From the tour operator's viewpoint, the inclusion of some substitutes in the package may increase profitability since costs are reduced. For example, if there are 50 people on a tour and  $n$  ( $<50$ ) decide to take the excursion, then only  $(50-n)$  will be eating the prepaid meal. Therefore the cost to the tour operator is  $(50-n)C_m + nC_e$  which is less than  $50(C_m + C_e)$  (1). Consumers, however, will be unwilling to pay an incremental price for the tour which includes both the meal price  $P_m$  and the excursion price  $P_e$ . They are willing to pay

an additional amount equal to the price of the component they expect to consume plus an additional amount to represent their additional utility gained from keeping their options open. The addition of some substitutes may only marginally change the cost of the package, but by doing so may substantially broaden the appeal of the package. This is because consumers have different tastes - some prefer the meal and some the excursion. Both are attracted to the package so long as the incremental package price does not exceed their reservation price for that component. Some components that do this are memory albums and free drinks. Therefore the tour operator must weigh the additional profits of broadening the market against the additional cost and subsequent higher tour price.

Substitutes can be added until, for the marginal consumer:

Reservation price of consumed components = tour price

As an example, assume a three day tour included in the tour price the following components:

Day 1	$A_1, B_1, C_1$
Day 2	$A_2, C_2, D_2$
Day 3	$A_3, E_3$

where  $A_1, A_2,$  and  $A_3$  represent accommodation on each of the three days and the other components are optional. If the consumer only wished to consume :

Day 1	$A_1$
Day 2	$A_2, C_2$
Day 3	$A_3, E_3$

then he would purchase the package if:

$$\text{Resvn. price } (A_1, A_2, C_2, A_3, E_3) \geq \text{Tour price}$$

If it is less than the tour price, he will purchase the components separately, assuming there are no information and transaction costs. If it is greater than the tour price, consumer surplus will be realised. If there are information (I) and transaction costs (T) to the consumer, as undoubtedly there will be, then the marginal consumer will purchase the tour if:

$$\text{Resvn. price } (A_1, A_2, C_2, A_3, E_3) \geq \text{tour price} + I + T$$

If it is greater than the tour price again consumer surplus is realised. If it is less than the tour price, the consumer will purchase the components separately. In addition, if the potential tourist attains additional utility from group travel, he may choose a tour rather than travel individually. In this case if:

$$\text{Resvn. price} + \text{group utility} \geq \text{tour price} + I + T$$

he will purchase the tour. Single people looking for traveling companions might perceive additional utility in group travel. Special interest tours are another example. These are tours which cater to a specific interest or group. Examples of such tours are art appreciation tours, action tours, educational and cultural tours, adventure and exploration tours and gourmet tours. In this case there

is an additional utility to the consumer since many of the components may not be available to the individual traveller.

The tour operator has a tradeoff when considering whether to include an additional component in a tour. He must decide whether the addition of that component will increase or decrease his total net revenue. This decision can be clarified by dividing consumers into four groups based on their purchasing decisions before and after the component is added. The following diagram shows these four groups.

		Purchase tour with component	
		YES	NO
Purchase tour without component	YES	A	B (loss)
	NO	C (gain)	D

Let the reservation price for the tour without the additional component  $x$ , and the reservation price for the additional component be  $r_t$  and  $r_x$  respectively. Let the price of the tour without the component be  $P_t$  and the increase in price due to the additional component be  $dP_t$ . Therefore the selling price of the package with the component  $x$  is  $P_t + dP_t$ . The cost of the component to the consumer is  $Cx$ , and  $P_x$  is the equivalent retail price of the

component.  $dP_t$  and  $P_x$  are not necessarily equal. In fact if scale economies are being experienced and these are being passed on to the consumer (as was shown in Chapter 3),  $dP_t < P_x$ . Also in perfect competition  $C_x = dP_t$ , however it is not necessarily true in reality.  $C_x$  is also impossible to estimate, since tour operators are unwilling to give this information.

Cell A represents consumers who are willing to purchase the tour both with or without the additional component. For these consumers:

$$r_t > P_t$$

$$\text{and } r_t + r_x > P_t + dP_t$$

For the marginal consumer, since  $r_t = P_t$ , the new package will be purchased if:

$$r_x > dP_t$$

For the non-marginal consumer, consumer surplus is realised. If there are  $N_a$  of these consumers (marginal and non-marginal) then the revenue difference to the tour company by adding the component is:

$$N_a dP_t$$

This represents a revenue gain. The increase in profits is  $N_a(dP_t - C_x)$  after adding the component, if all people consume the component  $x$ . Some people in cell A may not consume  $x$ . If there are  $N_{ax}$  who do consume  $x$ , the total cost is then  $N_a(dP_t) - N_{ax} C_x \cdot (N_{ax} < N_a)$ .

In Cell B, consumers would purchase the tour without the additional component, but not when the additional component is added. Therefore for them:

$$r_t \geq P_t$$

$$\text{but } r_t + r_x < P_t + dP_t$$

This can also be stated as:

$$r_t - P_t < dP_t - r_x$$

Therefore the amount by which the consumer's reservation price for the tour without the component exceeds its price, is less than the price increment less the reservation price for that component.

For the marginal consumer for whom  $r_t = P_t$  :

$$dP_t - r_x > 0$$

$$\text{or } dP_t > r_x$$

meaning that the consumer values the component less than its price and would not purchase it even in the component market. If there are  $N_B$  of these consumers then the revenue loss is:

$$0 - N_B P_t = -N_B P_t$$

Cell C represents those consumers who would not purchase the tour without the component but who will purchase it with the component.

For these consumers:

$$r_t < P_t$$

$$\text{but } r_t + r_x > P_t + dP_t$$

$$\text{or } r_t - dP_t > P_t - r_x$$

meaning that the additional satisfaction gain by adding the component is so large relative to the additional price that the consumer will now buy the tour. This is why the tour is now purchased. For example, consumers wanting to visit Europe may not purchase a tour unless it includes London as one of the component destinations. Similarly the inclusion of a particular excursion at a destination, or a specific hotel may cause the consumer to now purchase the tour, whereas without it he would not have purchased it. If the component can be purchased in the separates market for  $P_x$  then the additional tour price for adding this component,  $dP_t$ , must not exceed  $P_x$ . If the component is not available in the separates market (pure bundling) then the price can be higher due to monopoly power. this will be discussed later. If there are  $N$  of these consumers, then the revenue gain is

$$N_c (P_t + dP_t)$$

Cell D represents those consumers who do not purchase the tour before or after the component is added and are therefore of no interest to this discussion.

Now consider the tour operator's decision of how many components to include in the package so that profits are maximised. Given that the industry is competitive, long run equilibrium profits will be zero.

Profit,  $\pi$  = revenue - cost

If  $N$  people purchase a tour whose price is  $P_t$  and whose cost to the tour operator is  $C_t$  then,

$$\pi = N (P_t - C_t)$$

Now, in order to find the impact on profitability of including one more component in the package, differentiate with respect to  $x$  (the additional component) to find the first order conditions:

$$\frac{\partial \pi}{\partial x} = \frac{\partial N(P_t - C_t)}{\partial x} + \frac{N \partial P_t}{\partial x} - \frac{N \partial C_t}{\partial x}$$

This can now be interpreted using the notation previously defined. Taking each of the terms on the right hand side and explaining them one at a time:  $\partial N / \partial x$  represents the change in the number of people who purchase the tour as a result of adding component  $x$ . This is  $N_C - N_B$ .

$$\frac{\partial \pi}{\partial x} = (N_C - N_B)(P_t - C_t) + \frac{N \partial P_t}{\partial x} - \frac{N \partial C_t}{\partial x}$$

$N \partial P_t / \partial x$  represents the number of people now purchasing the tour multiplied by the change in the price of the tour after the addition of component  $x$ . This is  $(N_A + N_C - N_B) \partial P_t$ .

$$\frac{\partial \pi}{\partial x} = (N_C - N_B)(P_t - C_t) + \frac{(N_A + N_C - N_B) \partial P_t}{\partial x} - \frac{N \partial C_t}{\partial x}$$

$N \partial C_t / \partial x$  is the number of people who consume component x multiplied by the additional cost of the tour due to component x. The number of people who consume component x is  $(N_{ax} + N_c)$  and the additional cost of the tour is  $Cx$ .

$$\frac{\partial \pi}{\partial x} = (N_c - N_B)(P_t - C_t) + (N_a + N_c - N_B) \partial P_t - (N_{ax} + N_c) Cx$$

Therefore to determine the maximum profitability, the first order conditions give:

$$\frac{\partial \pi}{\partial x} = 0$$

$$\text{or } (N_c - N_B)(P_t - C_t) + (N_a + N_c - N_B) \partial P - (N_{ax} + N_c) Cx = 0$$

rearranging,

$$(N_c - N_B) P_t + (N_a + N_c - N_B) \partial P_t - (N_{ax} + N_c) Cx - (N_c - N_B) C_t = 0$$

$$\text{or, } (N_c - N_B) P_t + (N_a + N_c - N_B) \partial P_t = (N_{ax} + N_c) Cx - (N_c - N_B) C_t$$

The left hand side of this equation represents the increase in revenue due to the addition of component x, or the marginal revenue. The right hand side represents the change in cost due to the addition of component x, or the marginal cost. Therefore the first order conditions show that components will be added until marginal revenue equals marginal cost. Under competition the price will equal the

marginal cost of the tour. In the long run, profits will be zero, since the industry is competitive.

The impact of additional consumers on profitability can be similarly analysed. Starting with the same profit function:

$$\begin{aligned}\pi &= \text{revenue} - \text{cost} \\ &= N (P_t - C_t)\end{aligned}$$

Now, differentiate with respect to N

$$\frac{\partial \pi}{\partial N} = (P_t - C_t) + N \frac{\partial P_t}{\partial N} - N \frac{\partial C_t}{\partial N} = 0$$

or

$$P_t - C_t = N \left( \frac{\partial C_t}{\partial N} - \frac{\partial P_t}{\partial N} \right)$$

$\partial C_t / \partial N$  represents the effect that additional consumers have on the cost of the tour.  $\partial P_t / \partial N$  represents the change in the price of the tour as a result of an additional consumer. If the tour operator is on the declining section of the average cost curve then  $\partial C_t / \partial N$  is negative. If the additional consumer takes the firm beyond the optimal size (or if the firm has already exceeded the optimal size) then  $\partial C_t / \partial N$  will be positive.  $\partial P_t / \partial N$  will have the same sign as  $\partial C_t / \partial N$ , because in competition price equals marginal cost. Therefore the tour operator will maximize his profit by selling to additional consumers until the difference between these two equals the profit margin. In equilibrium, in a contestable market, profits will be zero.

Consumer preferences, reservation prices and hence the numbers in each consumer group are difficult to determine. These numbers also depend on the degree of convergence of tastes. For example,  $N_a$  and  $N_B$  will be larger the more convergence there is.

Three propositions can be deduced from this analysis. They are as follows:

Proposition 1: More people travel independently than on a basic tour, more purchase basic tours than intermediate tours, and more purchase an intermediate than an inclusive tour.

Proposition 2: Basic tours represent a greater saving to the consumer over the equivalent retail costs than do intermediate and inclusive tours.

Proposition 3: Taste convergence is progressively greater from the independent traveler to the inclusive tour.

Each of these propositions will now be tested.

#### Proposition 1

It is expected that the more components that are added to a package, the fewer people will purchase the package tour. This can be demonstrated by analysing the number of tourists to a given

destination. Data on tourists to Hawaii will now be used to verify this hypothesis. The data comes from the Hawaii Visitors Bureau Expenditure Survey (1980). The data is discussed in more detail in Chapter Five. A sample of 1646 tourists to Hawaii was taken. Table 8 shows the breakdown.

Table 8

Visitors to Hawaii (1980) by Vacation Mode.

Vacation Mode	Number	Percent
Independent	965	59%
Basic tour	401	24%
Intermediate tour	241	15%
Inclusive tour	39	2%
TOTAL	1646	100%

The results show clearly that the more inclusive the tour, the less people purchase the tour. It should be noted that the sample under-represents younger tourists, students and those visiting the outer islands. It is unlikely that this bias will affect the basic results since young people are more likely to travel independently (to be demonstrated in Chapter 5). Even though tourists visiting the outer islands are more likely to purchase a more inclusive tour (to be demonstrated in Chapter 5), the ranking of tourists in each category is unlikely to be affected, because the numerical differences are so large.

### Proposition 2

Tables 5, 6 and 7 in Chapter 3 showed that the average savings for basic tours was 14.75%, whereas intermediate and inclusive tours were sold at a 4% and 5% premium respectively. It is important to note that guide or escort services were not included in the estimation of equivalent retail cost for intermediate and inclusive tours. Therefore these premiums may be over-estimations. The t-test to test the significance of these means showed that the price difference for the basic tour is significantly different from the inclusive tour at the 1% level ( $t=2.21$ ), whereas the intermediate and inclusive tours were not significantly different ( $t=.009$ ).

### Proposition 3

It is hypothesized that taste convergence will be progressively greater from the independent traveller to the inclusive tour. Those on an inclusive tour are expected to demonstrate the highest degree of convergence of personal characteristics, whereas independent travelers will tend to be more heterogeneous. This is because once they arrive at the destination they are free to do as they choose.

Age, income and party size will be used as proxies for taste. Income data were unavailable, and so daily expenditures were used as a

proxy variable. The rationale is that the more people earn the more they spend. This variable was used as a proxy for income by Mak and Moncur (1980). Table 9 shows the results of this analysis. The coefficient of variation standardizes the standard deviation for the size of the mean, and allows a comparison of standard deviations between groups.

Table 9

Coefficients of Variation for Tourist Characteristics on each  
Vacation Mode.

	Independent	Basic	Intermediate	Inclusive
<u>Age *</u>				
Mean	5.31	5.27	5.25	5.73
Standard deviation	1.39	1.46	1.51	1.31
Coefficient of variation	.26	.28	.288	.229
<u>Expenditure</u>				
Mean	67.55	72.21	75.01	83.27
Standard deviation	35.4	26.81	21.96	18.67
Coefficient of variation	.524	.37	.293	.224
<u>Party Size</u>				
Mean	2.135	1.93	2.0	1.77
Standard Devn.	1.019	.65	.7	.43
Coefficient of variation	.48	.34	.35	.24

\* The age data is grouped as follows:

< 10	1
10 - 19	2
20 - 29	3
30 - 39	4
40 - 49	5
50 - 59	6
60 +	7

The results show that there is little difference between the age variable, except for the inclusive tours. There is slightly less variation in age among those on inclusive tours. The expenditure or income proxy is more significant. There is progressively less variance in expenditure among the participants of more inclusive tours. It is also evident that there is less variance in the size of the traveling party, the more inclusive the tour.

The industry has reacted to the need to know consumer reservation prices in two ways. The first way is to offer a basic tour and then sell components which are not included in the package, but which the tourist chooses once he arrives at the destination. A briefing session is held where he is given information about tours, activities and entertainment. Often a breakfast is included as an incentive for the tourist to attend, and is listed in the brochure. The tour company makes up to 20% commission on the sale of options, and increases its revenue above the basic tour. An additional advantage is that the tourist whose reservation price for the components is less than the price will not be excluded. By giving the tour operator commissions, the supplier assumes that the tourist will not purchase his product without additional marketing. This may be true due to lack of information(5).

The difference in cost to the tour operator if he sells options at the destination rather than combining them into packages is small.

The revenue, however, may be greater due to the ability to satisfy a greater diversity of consumer tastes. If he includes options in the package, the cost to him is the lost revenue from those consumers who do not now buy the package because they did not want one or more of the options included. This is equivalent to  $N(P - C)$ . The cost of a briefing session at the destination is minimal and must be less than  $N(P - C)$  for the tour operators to do it this way. This is a way of obtaining profits for information. Interviews with tour operators revealed that they perceived consumers to be extremely price sensitive and that this perhaps is the most important decision variable. This hypothesis will be tested in the next chapter. Since the consumer has little information on the destination he may be reticent to purchase attractions and activities as part of a tour before arriving at the destination, and seeing what is available. Therefore this practice allows the consumer to keep his options open and make his purchasing decision when he is more informed about the choices. It also allows the tour operator to discover the individual reservation prices for goods, and is similar to car manufacturers deciding what should be standard equipment.

The second way in which tour operators are reacting to the need to know consumer reservation prices goes one step beyond the basic package. It is called the independent, or customized or 'unpackaged' tour which allows the vacationer to construct his own vacation from a choice of components offered by the tour operator. The brochure lists

possible components such as different quality hotels, car rentals, ground tours etc. The consumer chooses them and the travel agent books them. In this case the consumer will purchase only those components whose price is less than or equal to his reservation price. Repeat visitors are more likely to choose this method if they already are familiar with accommodations and attractions at the destination. Since the volume and hence the economies of scale are not so great now, the difference between the tour price and the equivalent retail cost may be smaller. The tour price will still be less than an independent vacation. It is hypothesized that profit margins will be less on these tours, because discounts from suppliers are smaller. One company was actually using this type of tour as a loss leader. This type of tour depends on some standardization of tastes to generate volume, but not so much as for a package tour. If there were no taste standardization the tour operator acts only as a travel agent. Two companies who did not directly offer independent vacations said that the consumers could be reimbursed for any unwanted component. This practice and the tendency toward independent packages further demonstrates the competitive nature of the industry and the need to know consumers' reservation prices.

It is common for a particular tour operator to offer all types of tours - basic, intermediate, inclusive and 'unpackaged' tours. This is an example of mixed bundling. Since people who purchase the unpackaged vacations have higher reservation prices for the chosen

components and are willing to pay more for them, basic packages are still offered for those with low component reservation prices. In this respect tour packaging is very similar to Barzel's example of restaurant menus offering a la carte or complete dinners, or dinners with dessert and beverage a la carte. By offering all types of tours, volume is kept large, so economies of scale of component costs are still experienced. The tour operator gets the same discount from suppliers and so is still able to offer the components at a price less than the retail equivalent price.

#### 4.2 Tour Packaging under Monopoly Conditions

It appears from the previous discussions that the tour operator industry in United States demonstrates the necessary conditions for contestability and there is no monopoly power. This is also true for most of the western world. There are, however, some areas of the world where monopoly power exists. This is true for some of the communist countries where the government controls all tourist flows, and for newly discovered destinations where competition has not yet entered. One country where monopoly power exists in the tour operator industry is the People's Republic of China.

The monopoly exists because of government control; all package tours to China must be purchased through the government agency. The country has only recently (in 1978) opened up to tourism and so it is also a new destination. China still has limited tourist infrastructure in terms of hotels and transportation links, therefore supply is limited. These three elements - government control, limited supply and newness of destination make tour packaging to China a unique monopolistic situation. All three conditions are not necessary for monopoly power. Examples of situations with only one of these conditions will be discussed later.

The government agency which sells all tour packages to China is the General Administration of Travel and Tourism(GATT). GATT also makes all arrangements for tourists and so acts as a tour operator.

Foreign companies are not permitted to develop and market tours to China. The monopoly of the Chinese government, therefore is in the sale of package tours, not in the control or ownership of facilities (6). GATT has 2 branches. China International Travel Service (CITS) controls packages for foreign tourists and China Travel Service (CTS) controls tours for overseas Chinese. The reason for this is somewhat political. The foreign tourists traveling with CITS are given better quality hotels and better service than are the overseas Chinese who travel with CTS, even though they pay the same price.

For a short time period from 1980 - 1982 foreign tour operators were allowed to deal directly with suppliers in China to develop their own tours. Excessive complaints about quality from tour operators and tourists made the government take control again and reestablish its monopoly. Since virtually no tourists visit China independently, this is an example of pure bundling.

Tour packages to China are sold to foreign travel agents on a bid basis, thereby allowing the Chinese government to extract monopoly rents. The travel agent then sells the tour in his locale for a price that he determines. The price at which the travel agent sells the package will depend on what he paid for it, which is of course determined by the demand from other travel agents who are bidding, the demand he expects there to be for the packages from his clients, and the supply. As already mentioned, the supply is limited. In Hawaii there are at least ten travel agencies selling packages to China. All

tours are for specific departure dates and a predetermined number of days. All tours are all-inclusive. This is as expected since the monopoly power of the Chinese government allows an 'all-or-nothing' situation. Some travelers may have a reservation price for a trip to China so high that many components may be added and still the reservation price of the tour exceeds the tour price. Brochures state that unused portions are not refundable, and there is no evidence of basic tours or ones where individual components can be added by the consumer. This again demonstrates some market power in this market. The destination is relatively unknown and information and transaction costs are high for an individual traveller to arrange his own activities. In fact, in most cases they are infinite since the government only permits individual travel to specially invited guests.

At the retail level, the market for tours to China is not a monopoly. The Chinese government could have chosen to offer one national tour operator the exclusive rights to sell its tour packages, thereby creating a monopoly in the retail market also. By opening up the sale of tours to many travel agents for bids, the prices paid may be higher than in an exclusive distributor situation. There may also be political reasons for allowing more than one retailer.

Table 10 shows the results of a price analysis for tours to China. These tours vary by length of the tour and by the number of cities visited. The airfare was first subtracted from the tour price. The tour price was then standardized for these two variables by

dividing by the product of the number of days and number of cities visited. The results show the average standardized prices for each company.

It is expected that in monopolistic situations, particularly the People's Republic of China, even though the tours are all-inclusive, there will be less taste convergence than in competitive inclusive tours. This could also be due to the fact that the same variety of tours is not available as in competitive situations.

Table 10

## Prices and Descriptions of Package Tours to China.

<u>Company</u>	Days	Cities	Land Price	Price/ Cities	Price/ Days	Price/ Days*Cities
Sino-American	20	14	1395	99	70	4.98
	22	15	1485	99	67	4.5
	15	9	995	110	66	7.37
	21	12	1495	124	71	5.93
						Mean = 5.70
Traveler's Choice	25	8	1834	229	73	9.17
Panda	21	9	1195	132	57	6.32
	27	10	1556	155	58	5.76
	23	10	1295	130	56	5.63
						Mean = 5.90
Cultural Travel	32	14	2240	160	70	5.0
	10	4	695	173	70	17.37
	17	6	1395	232	82	13.68
						Mean = 12.0
Dragon Horse	27	11	1895	172	70	6.38
	25	11	1495	135	60	8.54
	31	14	1795	128	58	4.13
						Mean = 6.35
Travel Ways	16	6	809	135	51	9.41
	25	9	1773	197	71	7.88
	24	11	1289	117	54	4.88
						Mean = 7.39
China Pacific	20	9	1382	153	69	7.68

Other instances of monopoly power in tour packaging are those where packages are tied to a specific event such as the Olympics, the Oberrammagau Passion Plays or the Rose Bowl. In these cases, the sellers of tickets to these events have some monopoly power because of the limited supply of tickets. More than one tour operator usually sells packages which include these events, and so at the retail level monopoly power does not exist.

The supply of tickets is limited and so many ticket purchasers will be tempted to resell at a higher price. This resale (scalping) is illegal. The tying of an event ticket to a tour package allows the seller to disguise the higher ticket price in the tour price, thereby evading the scalping laws and increasing profits.

Tickets may also be used as a price discrimination scheme. The tour operator may create different quality packages which include the event. For example, it may be possible to purchase two different packages, A and B, from the same tour operator which both include Olympics tickets. Package A may include accommodation at a budget motel and the tickets. Package B may include accommodation at a luxury hotel and the same tickets. Price discrimination exists if the ratio of price to marginal cost is different in the two markets. If the tour operator paid \$20 for the Olympic tickets, and \$75 for the motel, and \$150 for the luxury hotel, he may choose to price the two packages as follows:

Package A        \$100 [75(motel) + 25(tickets)]

Package B        \$200 [150(hotel) + 50(tickets)]

The consumer is only aware of the total package price. In this simple example, the ratios of price to marginal cost differ for A and B. For A it is 100/95; for B it is 200/170.

Those consumers who purchase package B value the good quality hotel and so have a less elastic demand. This allows the tour operators to extract more from the sale of the ticket by tying it with a good quality hotel. It is important that the price of package B is not so high that it is cheaper for a consumer to purchase package A and throw away the cheap motel.

The Oberrammagau Passion Plays are another example of limited supply tickets. Tickets to the plays were not available to US tourists without the tour tie-in. The ticket price could not be estimated; however, interviews with travel agents supported the hypothesis that price discrimination was occurring (7). Two companies offered similar tours with and without the Plays. In each case the premium paid for the Play tickets seemed to exceed the expected ticket price. Table 11 shows these prices.

Table 11

Prices of Tours Including Oberammagau Passion Plays.

Company	Tour Price With Plays	Tour Price Without Plays	Price Difference
American Express (23 days; similar itinerary)	2730	1834	896
United Travel (22 days; identical itinerary)	2720	2550	170
Brendan Tours (similar itinerary)	2953	2560	293

In summary, tour packages which include limited supply events may practise price discrimination to increase profits. They may also do this to evade scalping laws.

Cruise ships represent an interesting tourism bundle. Cruises include many components of a vacation such as accommodation, food and entertainment, and of course transportation. The cruise must be purchased with all components for a given price. (Optional tours are usually available at the ports of call). Many of the components are substitutes e.g. disco dancing and ballroom dancing. Food is usually very plentiful and four meals per day are offered. These are substitutes for some tourists, however they are included in the price. Some cruise companies in the past allowed tourists to purchase the components separately when they were on board the ship(8). This proved to be unsuccessful. Now cruises are offered as a component of a vacation which also includes transportation to the cruise departure point and some accommodation at one or both ends of the cruise.

This chapter has analyzed the phenomenon of tour packaging under conditions where monopoly power is absent and where it exists. In the former case, different types of tours are offered and consumers have a choice of the components they want included. When monopoly power is present, this is not usually the case, and tour operators may extract consumer surplus by practicing price discrimination. No instances of monopoly power in the retail market were found.

The next chapter will analyse the consumer's decision of whether to purchase a package tour, and which type to purchase.

### Footnotes

1. The tour operator must accept the risk of not knowing the size of  $n$  before the component is consumed. He may have to estimate  $n$  and pay the suppliers accordingly. Even so, the cost to him will be less than  $50(C_m + C_e)$  but may be greater than  $(50 - n)C_m + nC_e$ .
2. Telephone conversation with Pleasant Hawaiian Holidays Vice President, Peter Judd, November 12, 1983.
3. Touche Ross, "Tour Wholesaler Industry Study", Exhibit 17.
4. Ibid., Exhibit 19.
5. Ibid., p. 20.
5. The tour operator will usually sell the optional tour to the tourist at the retail price. For markets where the search costs for these tours is very high due to language and cultural difficulties, the price may be above the retail cost. This is evident in the Japanese market in Hawaii. Often these tourists pay twice the retail cost for an optional tour when purchased through a Japanese tour operator.
6. Choy, Dexter L., and Chuck Y. Gee, "Tourism in the People's Republic of China - five years after China opens its gates", Tourism Management, 4 (1983), pp. 85-93.

7. American Express Vacation Store, and Travel Ways Travel Agency,  
telephone conversations, 11 January 1984.

8. Conversation with Susie Kaeo, Marketing Director, American Hawaii  
Cruises, Nov. 1983.

## CHAPTER FIVE

### CONSUMER CHOICE MODEL

"...although those who never left their own country before, who were unacquainted with foreign tongues, and who wished to visit other lands .... were glad to join a personally conducted tour to the continent, there were many persons imbued with the English love of independence and isolation. They preferred to travel alone, or in the company of family and personal friends, to stop at the places which pleased them as long as they desired, to select their own route, and to feel themselves free to follow the impulse of the moment."

Thomas Cook, England 1860's.

The purpose of this chapter is to analyze the consumer's vacation mode choice. The vacation mode refers to the manner in which the individual takes a vacation. The possible modes are independently arranged vacations, basic package tours, intermediate package tours, and inclusive package tours. A fuller description of these options now follows, based on the analysis of previous chapters.

#### Independent Travel

The independent traveler purchases the components of a vacation separately either with or without the services of a travel agent. The components are priced individually and the consumer does not receive

any volume discounts since scale economies are not generated. The individual (or party) travels alone and does not receive the services of an escort unless they are purchased in the separates market.

#### Basic Package Tour

The basic tour consists of transportation and accommodation only which are sold for a given price. The volume generated allows the tour operator and consumer to take advantage of scale economies. The traveler may purchase other vacation components in the separates market when he arrives at the destination. Very little taste standardisation is required for this type of tour since no activities are included.

#### Intermediate Package Tour

The intermediate tour consists of accommodation, transportation and some sightseeing or activities at the destination. Scale economies are experienced, and information costs are reduced for the traveler. The traveler may still purchase some components separately at the destination. A little more taste standardisation is required for this type of tour, since consumers are also purchasing activities.

#### Inclusive Package Tour

This type of tour includes accommodation, transportation, more sightseeing and meals at the destination. Consumers purchasing

these tours show greater taste standardisation, and hence fewer of these tours are offered. The economies of scale are less for this type of tour than for the basic tour.

### 5.1 Development of Model

As discussed in Chapter Two, no work has been done to analyse this decision. All the vacation decision models to date analyse the destination choice rather than the mode choice. Rugg (1973), Witt (1983), and Mak and Moncur (1980) have all modelled destination choice and their results were discussed in Chapter 2.

Modal choices have been modelled in reference to transportation choices many times. These studies focused on the choice between public transportation (bus, train etc.) and private transportation (car, car pool etc.). Business trips and shopping trips have been modeled in this way using conditional logit analysis. McFadden's work (1974) is one of the most important in the field. He has developed a disaggregate modal choice model from utility theory. This will now be used as a basis for developing a vacation modal choice model.

Any study of behavioral choice can be described by three factors: the choice set of alternatives available to the decision makers, the attributes of the decision makers, and the model. Each of these three

will now be discussed separately with reference to the vacation mode decision.

#### 5.1.1 The Choice Set of Alternatives

For the individual who is deciding on the vacation mode to a given destination the set of alternatives consists of four elements. They can be described as independent travel, a basic package tour, an intermediate package tour and an inclusive package tour. The assumption is made that a given destination has all four modes available.

#### 5.1.2 Attributes of Decision Makers

An individual drawn at random from the population can be described by an attribute vector  $s \in S$ . These attributes  $s$ , will be socio-economic and behavioral variables. Many of the variables important in the vacation mode decision relate to the utility that is gained by the individual in avoiding the information and transaction costs associated with planning and partaking in a vacation. It is hypothesized that the more familiar the decision maker is with the destination the less likely he is to purchase an inclusive tour than a basic tour, and less likely to purchase a basic tour than to travel alone.

The number of people in the decision making and traveling unit

will also affect the mode choice. If a family of four is traveling together independently, then there are economies of scale in the information and transaction costs which are not experienced when an individual is traveling alone. Also, a single traveler may perceive additional utility in the companionship offered by a package tour, whereas a larger traveling party may not.

### 5.1.3 Model

This section will develop a model of consumer choice based on the general assumptions of consumer choice theory. First of all, these assumptions will be explained.

#### Assumptions

1. Rationality: It is assumed that each consumer will choose the vacation mode which maximises his utility. Utility for different alternatives will vary with individuals.

2. Limited Resources: Each consumer has limited economic resources. Leisure time for vacations is limited, especially for working individuals, and of course money is limited. The goal of each consumer (or traveling group) then is to maximise his utility subject to time and money constraints.

3. Imperfect Knowledge: Since the vacation is a search good, the

consumer does not have perfect knowledge of the components (or potential components) of a vacation at a given destination. He may be unaware of them or may over- or under-estimate their prices. The inclusive package tour does not require knowledge on the part of the consumer. He simply arrives at the airport, and entrusts himself to the tour organizer.

4. Utility of Attributes: It is assumed that the consumer derives utility from a vacation, not from the particular mode, but from the attributes of that mode. This is Lancaster's utility theory.

5. Modal Characteristics: Each vacation mode described above has different attributes such as length of the tour, price of the tour, number of components included etc. Each mode is a combination of these attributes. The modes are mutually exclusive for a given vacation for a given consumer.

6. Non-modal Characteristics: The choice of vacation mode will be influenced by socio-economic characteristics and preferences of the traveler.

Each individual has a vector,  $s$ , of observed attributes which represent his taste, income, vacation mode etc., and faces  $J$

alternative choices, indexed  $j=1, 2, \dots, J$ . Each choice represents a vacation mode to a given destination and each choice is described by a vector of attributes  $x$ . For example, the vector of attributes for a package tour (versus independent travel) may be the activities on the tour, the difference between the tour price and the equivalent retail cost, the price per day etc.

The individual has a utility function which can be expressed as a function of the vector of modal attributes,  $x$  and the vector of consumer attributes,  $s$  in the following way:

$$U = U(x, s) \quad (1)$$

The rationality assumption requires that the individual maximise his utility, and so vacation mode  $i$  will be chosen if and only if:

$$U(x_i, s) > U(x_j, s) \quad \text{for all } j.$$

Since the two vectors  $x$  and  $s$  do not fully capture all the factors affecting the vacation mode decision, the function  $U$  is stochastic. It can be split into two parts as follows:

$$U = V(x, s) + \varepsilon(x, s) \quad (2)$$

where  $V$  denotes the representative tastes of the population and is therefore non stochastic.  $\varepsilon$  then reflects the individual variations in taste which affect the vacation mode choice and

represents the stochastic part. Then the vacation mode  $i$  will be chosen when:

$$V(x_i, s) + \epsilon(x_i, s) > V(x_j, s) + \epsilon(x_j, s) \quad i \neq j \quad (3)$$

or briefly 
$$V_i + \epsilon_i = V_j + \epsilon_j \quad (4)$$

There is only a probability that equation (4) holds because the values of the utility function are stochastic. Let this probability be  $H_i$  :

$$\begin{aligned} H_i = h(x, s, i) &= \text{prob}[V_i + \epsilon_i > V_j + \epsilon_j \quad | \text{ for all } i \neq j \\ &= \text{prob}[\epsilon_j - \epsilon_i < V_i - V_j \quad | \text{ for all } i \neq j \quad (5) \end{aligned}$$

Now let the stochastic term  $w = \epsilon_j - \epsilon_i$  have a cumulative distribution  $g(x, s)$  and let  $V(x, s)$  represent the non-stochastic term  $V_i - V_j$ . Then:

$$H_i = g[V(x, s)] \quad (6)$$

In order to empirically estimate  $H_i$ , the form of the utility function  $U$  must be known. It is assumed to be linear in parameters. The form of the cumulative distribution function  $g(x, s)$  must also be known. Suppose the stochastic terms  $\epsilon_j$  ( $j = 1, 2, \dots, J$ ) are jointly distributed with some cumulative distribution such that the

probability that  $\epsilon_j$  has the specific value  $w_j$  is  $\Psi(w_1, w_2, \dots, w_j)$ .

Then the probability that

$$\epsilon_i = \begin{cases} t & \text{if } i=j \\ t + V_i - V_j & \text{if } i \neq j \end{cases}$$

is given by

$$H_i = \int_{t=-\infty}^{\infty} \Psi_i[t + V_i - V_1, t + V_i - V_2, \dots, t + V_i - V_j] dt \quad (7)$$

The probability of choosing alternative  $i$  can be evaluated by assuming  $\epsilon_j$  are independently distributed with the reciprocal exponential distribution.

$$\text{Prob} [\epsilon_j < w] = \exp(-e^{-w})$$

The joint cumulative distribution function is:

$$\begin{aligned} \Psi(w_1, w_2, \dots, w_J) &= \exp(-\sum_{j=1}^J e^{-w_j}) \\ \text{and } \Psi(w_1, w_2, \dots, w_J) &= \exp[(-\sum_{j=1}^J e^{-w_j})(e^{-w_i})] \end{aligned}$$

Therefore the probability of choosing alternative  $i$  is:

$$\begin{aligned} H_i &= \int (e^{-\sum_{j=1}^J e^{-w_j}})(e^{-w_i}) dt \\ \text{or } H_i &= e^{V_i} / \sum_{j=1}^J e^{V_j} \end{aligned}$$

The relative odds of choosing alternative  $i$  over alternative  $j$  is:

$$\frac{H_i}{H_j} = \frac{e^{v_i}}{e^{v_j}} \quad (8)$$

and the natural logarithm of this ratio is

$$\ln (H_i / H_j) = v_i - v_j$$

or  $\ln (H_i / H_j) = v(x_i, s) - v(x_j, s) \quad (9)$

This is the conditional logit model. The left hand side represents the log of the probability ratio between two alternatives i and j. The equation as a whole states that this is a function of the difference between the attributes of the alternative modes and of the tourist party. This is the relationship that will be tested empirically below.

The next section will determine which variables are important in the vacation mode decision, and will specify the empirical model to be tested.

## 5.2 Selection of Variables

This section will determine the selection of variables for the

model. The main factors affecting the individual's choice of vacation mode can be summarized as follows:

1. price of each mode
2. the information and transaction costs associated with each mode
3. the additional utility gained from group travel measured by the socio-economic characteristics of the travelers.

Each of these factors will now be considered separately.

#### 5.2.1 Price

It is expected that vacations have a downward sloping demand curve implying that price is inversely related to quantity purchased. Pleasure travel has been shown to be more price elastic than business travel. Askari found the price per day to be the most important factor affecting the consumer's decision. The Touche Ross survey investigated the price sensitivity of tour travelers and found that 22% would not travel if the price increased by less than 10%; 68% would not travel if there were to be a 10 - 19% increase; and 93% would not travel if the price increased by 20 - 30%. If the tour costs increased dramatically, 38% would choose another destination, 23% would postpone their trip, and 10% would limit their travel by spending less time or visiting fewer places. Only 15% said their plans would not change, and demonstrated inelastic demand.

Transportation mode choice models have used both the price difference between the chosen mode and the base mode(1), and the price ratio of these two variables(2). Oum (1979) shows the price difference variable to be more accurate when calculating elasticities of substitution and price, because they are not dependent on the base mode. If the price ratio is used, the elasticities are dependent on the base mode. Both the price difference and price ratio variables will be tested in this study. The price difference variable will be measured as the difference between the price of the base mode (independent travel) and the tour price. The price of independent travel is estimated by summing the price of the vacation components at retail cost (equivalent retail cost). This variable measures the degree to which the consumer is receiving a discount for purchasing a tour over independent travel. Since the consumer may not always have the information on retail prices at the destination to make the comparison, the variable may not be as significant as in a world with free information. If the tour price is less than the equivalent retail costs, this is a measure of the volume discounts which are passed on to the consumer. For the independent traveler this variable will be zero. The Touche Ross study found price savings to be the second most common reason for individuals to purchase package tours. If the tour price is more than the component retail costs, this is a measure of the premium that the consumer is willing to pay for the information and transaction costs of the tour.

The price ratio will be measured as the tour price divided by the price of the base mode, independent travel. The price for independent travel will be estimated in the same way as for the price difference. Therefore the price variables that are important to the vacation mode decision and which will be tested in this model are as follows:

PDIFF - the difference between the tour price  
and the price of the base mode (independent  
travel).

PRATIO - the price of the tour divided by the price  
of the base mode (independent travel).

### 5.2.2 Information and Transaction Costs

The previous chapter has established that one of the tour operator's main roles is to gain information about the destination and its facilities, and to facilitate transactions. Therefore it is expected that individuals who have higher information and transaction costs in arranging their vacation will favor package tours with increasing degrees of inclusivity. The Touche Ross survey found 'convenience' or the avoidance of these information and transaction costs to be the greatest perceived benefit of package tours. It is expected that degree of familiarity with the destination will play an important role here. The less familiar an individual is with the destination, the higher the information and transaction costs and so the more he will value avoiding these costs. Therefore the traveler who is less familiar with the destination is more likely to purchase a more inclusive tour. This familiarity can be measured empirically by the number of times the individual has previously visited the destination, and by the distance from the individual's home to the destination. Distance can be measured using roundtrip airfare as an imperfect proxy variable. It is felt that distance is important because the closer an individual lives to a destination, the more information about the destination will be available to him. The information may be commercially available or it may be word-of-mouth information from previous visitors to the destination. The Touche

Ross study found that unfamiliarity with the destination was the third most common reason to purchase a tour, especially an escorted tour.

Party size is also expected to have an effect on information and transaction costs. If the party is large, economies of scale can be generated within the party. The cost of gaining information on the destination and the cost of making reservations remains the same whether it be for a party of one or a party of six. If a party of six, say, purchases a package tour, they are paying the tour operator six times for the elimination of these costs. Therefore independent travel may prove to be less costly for larger parties than for smaller parties . It is therefore hypothesised that smaller parties will be more likely to purchase package tours.

The individual's time constraint, measured by the length of the vacation, will affect mode choice. It is expected that for longer vacations where the value of time on the vacation is less , individuals will be more willing to spend time 'discovering' for themselves. Tourists on shorter vacations are expected to value their time more. This is because they have less time and do not wish to spend it finding out information, but rather enjoying themselves. They will be more likely to purchase a package tour, which minimizes their information and transaction costs. Therefore it is hypothesized that length of stay will be negatively correlated with the inclusivity of the tour.

Transaction costs (TRANS) can be represented by the following function:

$$\text{TRANS}_{ij} = g_j(\text{LSTAY}_i, \text{PTYSZE}_i, \text{NUMDEST}_i) \quad (10)$$

where LSTAY represents the length of the vacation in days.

### 5.2.3 Utility from Group Travel

Some consumers will choose to travel with a package tour because they perceive additional utility in doing so. It is expected that people traveling individually or as a couple may join a group tour for companionship reasons. The party size variable is therefore expected to be negatively correlated with inclusivity. This reinforces the hypothesis made above. Also, by joining a particular tour the traveling party may feel assured that the traveling companions will have similar tastes and life styles. Additional utility may be attached to it for this reason. It is expected that inclusive tours will demonstrate this feature more than basic tours. Chapter 4 showed there to be more similarity between inclusive tour participants than basic tour participants.

It is hypothesized that older people will value traveling with similar companions more and will also value the convenience of package tours. Therefore age is expected to be negatively correlated with

inclusivity. The income variable could have two effects on the vacation mode decision. Firstly, higher income travelers may prefer travel befitting their status in life, and may prefer to travel independently if high quality tours are unavailable. Secondly, and for similar reasons, high income travelers may be attracted to high quality inclusive tours which attract similar high income consumers. These inclusive tours have been shown to have a high degree of taste standardisation in Chapter 4.

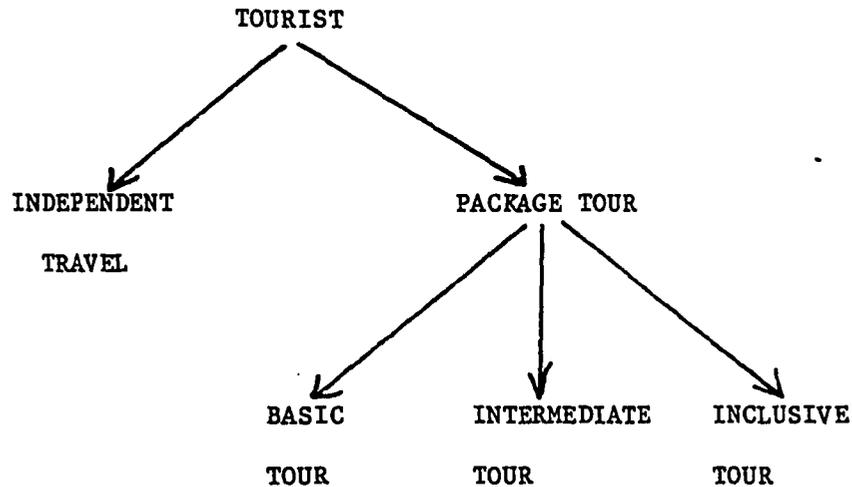
Therefore group utility (GRPUTL) for a given consumer may be expressed as follows:

$$\text{GRPUTL}_{ij} = h_j(\text{PTYSE}_{ij}, \text{AGE}_{ij}, \text{INCOME}_{ij}) \quad (11)$$

The next section will develop the empirical model.

### 5.3 Empirical Model

It is assumed that the tourist makes his vacation mode choice in two phases. The first phase is to choose between traveling independently or purchasing a package tour. The second phase, given that a package tour is chosen, is the choice between a basic, intermediate or inclusive tour. This vacation mode choice model can be represented as follows:



The first phase of this decision is dependent on the degree to which the traveling party wishes to avoid information and transaction costs, and the price of the vacation. The reasoning behind these variables has already been discussed in the above sections. The mode choice can be modeled as follows:

$$TTYPE_{ij} = f_j(I_{TRANS_i}, TRIPNO_i, TRPTRNS_i, NUMDEST_i, PTYSZE_i, DLST_i, PDIFF_i, AGE_i) \quad (12)$$

where  $TTYPE_{ij}$  represents the binary choice of consumer  $i$  between the  $j$  mode choices, independent vacation or tour.  $TRPTRNS_i$  is an interaction term between  $I_{TRANS_i}$  and  $TRIPNO_i$  to capture the destination familiarity variable.  $DLST_i$  is a dummy variable in place of the length

of stay variable. The dummy takes the value one if the length of stay is greater than 14, and takes the value zero if the length of stay is less than or equal to 14. Similar models will be tested with PRATIO as a price variable instead of PDIFF. It is expected that ITRANS, PTYSZE, TRPTRNS, DLST, PRATIO and PDIFF will have negative coefficients. NUMDEST and AGE are expected to have positive coefficients. Equation (12) is the specification of the variables which are important for the logit model derived above in equation (9).

The second phase of the mode choice is between three different kinds of package tours. Here the socio-economic variables of the traveling party are expected to be important in the decision. Two dummy variables were constructed to capture the effect of age on the decision. The party head's age was divided into three generations:

less than 30 years	AGED1 (value 1)
30 - 60 years	
60 + years	AGED2 (value 1)

It is expected that travelers over the age of sixty will be more likely to travel on an inclusive or intermediate tour than a basic tour. Data on income were unavailable and so daily expenditure per person (EXPEND) is used as a proxy variable for permanent income. The rationale for this is that the more money people earn, the more they will spend on their vacation, and so vacations are normal goods. It is expected that this proxy variable will be positively correlated with tour inclusivity.

Occupation (OCCUP) of the party head is expected to have some impact on the tour decision. It is expected that retired and less educated occupations will be more likely to purchase a package tour. Retired consumers will prefer a tour over independent travel because they value the elimination of transaction and information costs, because they are older and less prepared to do their own footwork. Less educated consumers may not be aware of information sources available to them and so will purchase a tour. Therefore occupation dummy variables were created as follows:

OCC1 professional  
OCC2 managerial  
OCC3 clerical, sales  
OCC7 retired

An empirical model to test the package tour decision using solely socio-economic variables is as follows:

$$PKG_{ij} = f_j(AGED1_i, AGED2_i, EXPEND_i, PTYSZE_i, OCC1_i, OCC2_i, OCC3_i, OCC7_i)$$

where  $PKG_{ij}$  is the type of package chosen by consumer  $i$ . It is expected that  $AGED1$ ,  $PTYSZE$ ,  $OCC1$  and  $OCC2$  will be negatively correlated with tour inclusivity. The remaining variables are expected to be positively correlated with tour inclusivity.

It is also felt that the value of time on the vacation and price may affect the tour type decision. Those on short vacations will have less time to spend finding things out for themselves and so will favor inclusive tours where all arrangements are made. Similarly the number

of destinations visited will be important since the more destinations visited the greater the need for information at the destination.

Therefore the following model will be tested:

$$PKG_{ij} = g_i(AGED1_i, AGED2_i, EXPEND_i, PTYSZE_i, NUMDEST_i, LSTAY_i, PDIFF_i) \quad (13)$$

The modal choice is a binary one between a basic tour and a tour which includes some excursions or activities at the destination. Equation (13) specifies the variables that are important for the logit model in equation (9). The price difference and price ratio variables will also be included in this model. Their calculation differs from the first stage model because now the base mode is the basic tour and not independent travel. PDIFF is now the difference between the price of the chosen package and the equivalent basic package. If a basic tour is chosen, PDIFF will be zero. Otherwise the price of the base mode is calculated as the price of the accommodation and transportation at the basic tour price plus the additional components at their retail prices. PRATIO is calculated in a similar way except the quotient of the two modes is calculated rather than the difference.

#### 5.4 Data

The purpose of this section is to describe the data that will be used to estimate the model. The data were collected by Hawaii Visitors Bureau for their expenditure survey in 1980. A sample of 1800 incoming westbound visitors to Hawaii were surveyed to gain more information about their expenditure patterns. The sample was taken from the passenger information forms which are filled out by all incoming visitors to Hawaii via the US mainland and Canada.

Approximately 30 questionnaires were distributed each day to tourists in their hotels. All respondents were given a daily log in which they were asked to record socio-economic information, details of whether they purchased a package tour, what was included in the tour, and expenditure information. The sample was found to under-represent students and younger visitors and those visiting the outer islands.

The information on the types, prices and components of the tours had never been included in the analysis and tabulation done by HVB. Therefore some additional estimation was required. Appendix D shows the information that was requested from the respondents. The respondents were asked to state the components of the package tour. HVB then estimated the retail costs of these components using published retail price lists from suppliers (5). Most tours included air transportation to Hawaii, but this was not estimated by HVB. Therefore a 1980 edition of the Official Airline Guide was used to

estimate roundtrip airfares. In each case the lowest available excursion fare (Y class) from the home city was used in the price estimation. This is a conservative estimate since many travelers may have traveled at fares other than the lowest available one.

The vacation records were by party rather than by individual, therefore the model will predict vacation mode choice for parties rather than for individuals. Each vacation was classified into one of the following types:

- Independent travel: no package tour
- Basic Package Tour: package includes transportation, accommodation and lei greeting
- Intermediate Package: package includes transportation, accommodation, some sightseeing or activity and lei greeting.
- Inclusive Package: package includes transportation, accommodation, sightseeing, meals and lei greeting.

Since the sample consisted of travelers to Hawaii and not only tourists, some sorting of the sample was necessary. It was decided to include only those who were traveling for pleasure. Business travelers and convention-goers were eliminated from the sample since they were not making a vacation mode decision. Similarly, visitors who were staying with friends and relatives were

eliminated from the sample since the probability of them purchasing a package tour is zero (unless the package price is less than the round trip airfare).

#### FOOTNOTES

1. Studies which have used the price difference variable are  
McFadden, Daniel, "Measurement of Urban Travel Demand", Journal of Public Economics, vol 3, 1974, pp 303-328. Richards, Martin G., and Ben-Akiva, A Disaggregate Travel Demand Model, Lexington, Mass: Lexington Books (1975). and Boyer, K.D., "Minimum Rate Regulation, Modal Split Sensitivities and the Railroad Problem", Journal of Political Economy, vol 85, no. 3, June 1977, pp. 493-512.
2. Studies which have used the price ratio variable are: Boyer (1977) and Turner, R.E., "Freight Mode Selection in Canada", Canadian Institute of Guided Ground Transport (CIGGT), Report #75-14, Queens University, Kingston, Canada, October 1975.
3. It was felt that the single choice between the four modes did not adequately capture the consumer's decision-making process.
4. A possible way to estimate this variable is to modify the accommodation price by the average discount for the base mode, and add the other components at the equivalent retail cost.
5. Brochures and local tourist press were used as sources to estimate the equivalent retail cost of the components.

## CHAPTER SIX

### RESULTS

This chapter will present the results of the empirical models presented in Chapter 5. Two models of vacation mode choice were presented. The first predicted the choice between independent vacations and package tours. This was modeled in equation (12) in Chapter 5. The second predicted the choice between a basic tour and a somewhat inclusive tour. This was modeled in equation (13) in Chapter 5. Each of these choice models and their results will now be discussed separately.

#### 6.1 Results from the binary choice of Independent versus Tour.

Six different models were used to predict the vacation mode decision between independent travel and travel on a package tour. Table 12 shows the sets of variables that were tested. The results of these sets of equations are shown in Table 13. The parameters of the

logit models are maximum likelihood estimates (1). The likelihood ratio test was used to test the null hypothesis that the coefficients in the estimated equation are equal to zero. For each of the six sets the  $\chi^2$  values are above the critical values and so the null hypothesis that the coefficients are significantly different from zero can be rejected. This implies that the model explains the choice well.

Table 12

Six Models to test the Independent versus Package Tour Decision.

	SET 1	SET 2	SET 3	SET 4	SET 5	SET 6
<u>Information and Transaction Cost Variables</u>						
ITRANS	x	x				
(round trip airfare)						
TRIPNO	x	x			x	x
(number of visits)						
TRPTRNS			x	x		
(ITRANSxTRIPNO)						
NUMDEST	x	x	x	x	x	x
(number of destinations)						
PTYSZE	x	x	x	x	x	x
(size of party)						
DLST	x	x	x	x	x	x
(length of stay dummy)						
<u>Price Variables</u>						
PRATIO	x		x			x
(ratio of prices)						
PDIFF		x		x	x	
(price difference)						
<u>Socio-Economic Variables</u>						
AGE	x	x			x	x

Table 13

Results of the Choice between Independent Travel and Package Tours.  
 Dependent variable = TTYPE(0=independent, 1=package)  
 (N=1299; n(independent)=755, n(tour)=544)

Variable**	SET 1	SET 2	SET 3	SET 4	SET 5	SET 6
Constant	5.78 (8.14)	0.0084 (0.017)	5.9 (10.09)	-0.33 (-1.14)	-.637 (-1.72)	5.26* (8.73)
ITRANS	-0.0006 (-1.22)	-0.0009* (-1.82)				
TRIPNO	-0.44* (-3.46)	-0.426* (-3.26)			-.349* (-6.7)*	-.357 (-7.1)*
TRPTRNS	-0.0001 (0.59)	-0.0008 (0.38)	-.0004 (-5.6)*	-.005 (-6.1)*		
NUMDEST	0.24* (3.11)	0.215* (2.64)	0.304* (4.01)	0.264* (3.31)	.203* (2.52)	.236* (3.06)
PTYSZE	-0.25* (-3.05)	-0.37* (-4.03)	-0.256* (-3.21)	-0.37* (-4.12)	-.356* (-3.94)	-.245* (-3.02)
DLST	-.520* (-3.44)	-0.58* (-3.54)	-0.59* (-4.00)	-0.63* (-4.09)	-.601* (-3.8)	-.535* (-3.53)
PRATIO	-6.16* (-11.32)		-6.48* (-11.99)			-6.05* (-11.34)
PDIFF		-0.0043* (-12.41)		-0.0044* (-13.01)	-.004 (-12.2)*	
AGE	.11* (2.48)	.11* (2.27)			.111* (2.27)	.118* (2.47)
	$\chi^2=341.1\#$ 8 d.f.	$\chi^2=421.9\#$ 8 d.f.	$\chi^2=323.1\#$ 5 d.f.	$\chi^2=410.7\#$ 5 d.f.	$\chi^2=419.3\#$ 6 d.f.	$\chi^2=345\#$ 6 d.f.
	$R^2=.366$	$R^2=.412$	$R^2=.36$	$R^2=.41$	$R^2=.402$	$R^2=.36$

\* Statistically significant at 1% level. # Significant at 1% level.  
 \*\* For description of variables see Table 13.  
 Values in parentheses are t ratios.

Each of the variables was then tested to determine whether the variable was significant in the regression model. The asymptotic t test was used to do this. From Table 13 it can be seen that all of the coefficients except for ITRANS were found to be significant at the 1% level. Also, all of the coefficients had the expected signs - except for ITRANS which was expected to be positive. Therefore it is concluded that the use of ITRANS as a measure of the need for information about the destination is incorrect. Since the variable is not significant in the model, the distance of the domicile from the destination does not affect the degree to which information is available. This may be due to the fact that ITRANS is not an ideal proxy for distance since round trip airfare is a function of the total passenger volume traveling that route. It was noticed that round trip airfare from New York to Honolulu was less than that from many cities in the Mid-West and South of the United States. If distance (in miles) had been used to measure this variable it may have been significant.

TRIPNO was found to be statistically significant both in set 1 and set 2. Therefore the more frequently the traveling party has visited the destination, the more familiar the destination is and so the less likely a package tour will be purchased. TRPTRNS, the interaction term between ITRANS and TRIPNO was found to be significant as a proxy for knowledge of the destination.

The number of destinations visited on the vacation was found to be significant. The more destinations visited the more likely the traveling party is to purchase a package tour since the need for information is larger. The estimation showed that the larger the traveling party size (PTYSIZE) the less likely they are to purchase a tour. This confirms the hypothesis that economies of scale can be generated within the party and that smaller parties perceive additional utility in group travel.

The dummy variable for length of stay (DLST) is also significant and confirms the hypothesis that travelers who stay longer than 14 days at a destination are less likely to purchase package tours.

Both of the price variables (PDIFF and PRATIO) were found to be significant at the 1% level. This has an implication for tour operators in that the more discounts they can generate and pass on to their consumers the greater will be their volume.

All of the models had good predictive power, however sets 2 and 4 which included PDIFF have higher  $R^2$  than those with PRATIO as the price variable. The results prove the basic hypothesis that the consumer's decision is dependent on his utility in avoiding information and transaction costs and is dependent on the price of the tours and the price of the equivalent.

The elasticities ( $\epsilon$ ) of the variables can be calculated from the logit coefficient in the following way(2):

$$\varepsilon = \beta X_i (1 - p)$$

where  $\beta$  is the logit coefficient,  $X_i$  is the value of the variable at a given point (mean) and  $p$  is the probability of choosing mode  $i$ . Table 14 shows the elasticities for the variables:

Table 14

Elasticities of Variables

MODE	VARIABLE	COEFFICIENT	CHOICE PROB.	MEAN	ELASTICITY
TOUR	PRATIO	-6.14	.4188*	.94	-3.35
	PDIFF	-0.004	.4188	121.67	0.302
	DLST	0.499	.4188	0.68	0.197
	NUMDEST	0.257	.4188	1.68	0.25
	TRIPNO	-0.349	.4188	2.43	0.302

\*41.88% of the visitors purchased a tour.

These results show that all variables except for PRATIO are inelastic.

6.2 Results from the Package Type Decision

Once the travel party has determined that it will purchase a package tour, it then faces the decision of which type of tour to purchase. The three different types of tours (basic, intermediate and

purchase. The three different types of tours (basic, intermediate and inclusive) have been described earlier. It is expected that there will be little difference in the choice between an intermediate and inclusive tour since they both include activities at the destination. Equation (13) was tested for the choice between intermediate and inclusive tours. The results of the  $\chi^2$  test showed that the coefficients were not significantly different than zero at the 1% level. Therefore these two tour types will be aggregated (3). The models to be tested are shown in Table 15.

Table 15

Four Models to Test the Package Type Decision.

Variable	SET 1	SET 2	SET 3	SET 4
<u>Socio-Economic Variables</u>				
PTYSZE (party size)	x	x	x	x
AGED1 (dummy for age)	x		x	x
AGED2 (dummy for age)	x	x	x	x
EXPEND (daily expenditure)	x	x	x	x
OCC1	x			
OCC2	x			
OCC3	x			
OCC7 (occupation dummies)	x			
<u>Information and Transaction Cost Variables</u>				
NUMDEST (number of destinations)			x	x
LSTAY (length of stay)			x	x
<u>Price Variables</u>				
PDIFF (price difference)			x	
PRATIO (price ratio)				x

Sets 1 and 2 represent only the socio-economic variables of the traveling party. The other sets include variables which represent the value of time on the vacation and the price variables. The results of the logit analysis of these models is displayed in Table 16.

The results show that for the two models (sets 1 and 2) which contain only the socio-economic variables, the coefficients are not significantly different from zero. The  $\chi^2$  values are less than the cut-off value for 5% level of significance. Therefore these models do not adequately predict the vacation mode choice. This implies that factors other than socio-economic ones influence the choice of tour package.

The other two models (sets 3 and 4) both have coefficients which are significantly different from zero at the 5% level. NUMDEST is the only significant variable in both of these models. This implies that the more destinations that are visited, the more likely it will be that an inclusive tour is purchased, and that this is the only significant variable affecting the consumer's decision. It is interesting to note that neither the price difference between the types of packages, nor the price ratio plays a significant role in the package choice of the consumer. Both of these price variables were found to be significant in the first stage of the decision. This implies that once the consumer has decided to purchase a package tour, a price comparison is not important. It should be noted that the estimation of the price of the base mode may be inaccurate; however,

the results show that a very large error would be needed to make the price variables significant.

### 6.3 Conclusion

The consumer's vacation mode choice has been modeled by two separate decisions. First, the choice between an independently arranged vacation and a package tour was analyzed. The results of the empirical model showed the traveling party's familiarity with the destination to be an important predictive factor. The price of the two modes and traveler characteristics were also found to be important. The second stage of the model in which the consumer chooses the type of package showed price comparisons between different packages to be insignificant. The number of destinations visited on the vacation was found to be the only significant predictive variable. Socio-economic factors played no importance in the decision.

Table 16

Results from the Package Type Decision.  
 (Dependent Variable is PKG<sub>ij</sub>) n=544  
 (PKG = 0 if basic tour chosen, 1 otherwise)

Variable	SET 1	SET 2	SET 3	SET 4
CONSTANT	-1.54 (-3.13)	-1.48 (-3.34)	-1.54 (-2.11)	-1.3 (-2.50)
PTYSZE	0.268 (1.93)	0.247 (1.82)	0.264 (1.87)	0.26 (1.86)
AGED1	0.114 (0.466)		.2 (.816)	.197 (.81)
AGED2	0.091 (0.325)	0.175 (0.87)	0.187 (0.873)	0.184 (0.864)
EXPEND	0.009 (2.5)*	0.008 (2.27)*	0.006 (1.58)	.006 (1.58)
OCC1	-0.15 (-0.565)			
OCC2	-0.24 (-0.857)			
OCC3	(0.312) (0.87)			
OCC7	0.095 (0.269)			
NUMDEST			0.34* (3.14)	0.34* (3.13)
LSTAY			-0.54 (-1.89)	-0.05 (-1.89)
PDIFF				-.00005 (-0.2)
PRATIO			.14 (.27)	
	$\chi^2=11.02$ 8d.f. $R^2=.034$	$\chi^2=7.46$ 3d.f. $R^2=.041$	$\chi^2=18.23\#$ 7d.f. $R^2=.039$	$\chi^2=18.2\#$ 7d.f. $R^2=.035$

\* Statistically significant at 1% level. # Significant at 1% level.  
 \*\* For definition of variables see Table 15.  
 Values in parentheses are t ratios

### Footnotes

1. The coefficients were estimated using the Shazam computer program.

(See bibliography for reference).

2. The derivation of this equation is as follows:

Let  $P_1$  = probability of independent travel

$P_2$  = probability of package tour

$X_1, \dots, X_n$  are the explanatory variables.

$$\text{Given: } \ln P_1/P_2 = a + b_1 X_1 + b_2 X_2 + \dots + b_n X_n \quad (1)$$

$$\text{and } P_1 + P_2 = 1 \quad (2)$$

Also let  $y = a + b_1 X_1 + b_2 X_2 + \dots + b_n X_n$ , then equation (1)

becomes:

$$\ln P_1/P_2 = y, \text{ or}$$

$$P_1/P_2 = e^y \quad (3)$$

From (2) and (3),

$$P_1 = e^y (1 - P_1)$$

$$\text{or } P_1 = \frac{e^y}{1 + e^y} \quad (4)$$

$$\text{and } P_2 = \frac{1}{1 + e^y} \quad (5)$$

Elasticity of demand is defined as (for independent travel):

$$\epsilon_1 = \frac{d \ln P_1^i}{d \ln X^i} = \frac{X_1 \partial P_1}{P_1 \partial X^i} \quad (6)$$

$$\begin{aligned} \text{but } \frac{\partial P_1}{\partial X_i} &= \frac{\beta_i e^y (1 + e^y) - \beta_i e^y e^y}{(1 + e^y)^2} \\ &= \frac{\beta_i e^y}{(1 + e^y)^2} \end{aligned} \quad (7)$$

Form (6) and (7)

$$\epsilon_1 = \frac{X_i (1 + e^y) \cdot \beta_i e^y}{e^y (1 + e^y)^2} = \frac{\beta_i X_i}{1 + e^y}$$

$$\text{or } \epsilon_1 = \beta_i X_i (P_2) = \beta_i X_i (1 - P_1)$$

Similarly for tour travel.

3. A major reason for the aggregation of the two groups is the fact that an algorithm for a multinomial logit analysis was unavailable. A multinomial probit analysis was performed on the three way choice and the following results were obtained:

$$\begin{array}{cccccc} \text{PKG} & = & -.83 & + & .12\text{PTYSZE} & + & .117\text{AGED2} & + & .23\text{NUMDEST} & - & .03\text{LSTAY} & + & .004\text{EXPEND} \\ & & (-2.67) & & (1.52) & & (.98) & & (3.75) & & (-2.04) & & (1.89) \end{array}$$

$$\chi^2 = 23.85; \quad 5 \text{ d.f.}$$

The results are almost the same as the binary logit model except that LSTAY was also significant. The longer people stay at a destination the more likely they are to buy a basic tour. A price variable was not included because the algorithm could not handle it. Another limitation of this model is that there are only 28 observations in the inclusive tour category.

## CHAPTER SEVEN

### SUMMARY AND IMPLICATIONS OF STUDY

This thesis has analysed the phenomenon of tour packaging. It has provided a much needed analysis of the tour packaging industry which, until now, has been studied only minimally and superficially. The analysis showed that in most instances there is no monopoly power in the tour packaging industry, and that it displays most of the characteristics of a contestable market. Monopoly had previously been thought to be a prerequisite to packaging or tie-in sales. This was not found to be the case in tour packaging. A limitation of the study is the lack of profitability data of tour operators. Such data could enhance the discussion of industry structure and is clearly an area for further study.

One of the main functions of the tour industry is the collection and processing of information. In the past, little capital outlay was required to perform this function. More recently, the advent of information technology has made this function more labor efficient. This capital investment in computer hardware and software, however, may limit somewhat the ease of entry and exit into the industry, and may cause the industry to become less contestable in the future. Another factor affecting the industry is the recent deregulation of

the travel agent industry. Even though the tour operator industry itself is not regulated, there may be a small increase in the number of firms selling package tours as a result of travel agent deregulation. This is not expected to have a major impact on the industry.

Instances of tour packaging under monopoly conditions were also discussed in the thesis. They fell into two categories: packages attached to a limited supply event (such as the Olympics), and packages to China where the government is the only agency selling tours. In both categories the monopoly power was found not to extend into the retail market. In the case of China, only all-inclusive tours were available. China is now allowing independent travelers to visit the country. This will remove some of the market power of the government, since travelers will be able to purchase directly from suppliers. In the case of limited supply events, price discrimination was found to be a natural economic behavior of tour operators to extract maximum consumer surplus.

When no monopoly power is evident, different levels of inclusivity of tours are usually available. These three levels were described as basic, intermediate and inclusive. A price analysis was performed on a sample of eighteen package tours to the Hawaiian Islands. The analysis revealed that basic tours (accommodation and transportation only), offer more of a saving to the consumer over the equivalent retail cost than do inclusive and intermediate tours. In

fact, most firms charged a small premium for inclusive and intermediate tours. It was also found that tourists on inclusive tours demonstrated a greater similarity of tastes (measured by socio-economic characteristics) than did those on a basic tour.

A second major contribution of this dissertation is that it has incorporated and extended the theory of commodity bundling to explain the consumer's purchasing decision. The consumer's mode choice of whether to purchase a package or to purchase the components separately is modeled. None of the studies of the economic theory of bundling reviewed in Chapter Two attempted to model this decision. The choice model could easily be adapted and applied to other packaging decisions.

The vacation mode decision was divided into two stages. Firstly, the decision of whether to purchase a tour or to travel independently was modeled; and secondly, the type of package purchased is analysed. A consumer choice model was developed for the first stage based on the premise that three factors affect the choice. These are, the additional utility gained from purchasing the package, the information and transaction costs of each option, and the price difference (or ratio) between the choices.

The model was tested using data on tourists vacationing in Hawaii in 1980 collected by Hawaii Visitors Bureau. All three factors in the first stage decision were found to be significant at the 1% level, and so the hypothesis was verified. In the second stage of the decision,

it was hypothesized that socio-economic characteristics, information and transaction costs, and price variables be important variables. This hypothesis was not verified. The only significant variable was the number of destinations visited (a proxy for information and transaction costs). The more destinations visited on a vacation, the less likely the consumer is to purchase a basic tour. Many basic tours do not include multiple destinations so the reason may also be due to supply side constraints.

These findings have marketing implications for tour operators. The first stage results suggest that tour operators should package vacations which have high information and transaction costs for the independent traveler. Such vacations might be ones which include a number of different destinations. Packages to Hawaii should include visits to the other islands. Tours to Europe should include a number of major areas or countries. The destinations should also be ones which are not easy for the traveler to locate information on due to language difficulties or other communication problems. Tour operators would also be prudent to provide components on the tour which add to group utility. Examples of such components are special attractions that are unavailable in the retail market. Finally, when the consumer is choosing between independent travel and a package tour, the price of the two options is very significant and so the tour operator should be as price competitive as possible. The second stage results show that consumers are relatively insensitive to price once

they have decided to purchase a package. If the market for a firm consists only of consumers already committed to traveling on a package tour, prices could be higher than if the market includes consumers in the first stage of the decision, since those committed to purchasing a package tour of some kind have a more inelastic demand. The second stage model again showed the number of destinations visited to be the only significant factor in package choice. Socio-economic and price variables were not found to be significant.

This dissertation also has implications for the growth of a destination. It has been shown that people are more likely to purchase package tours when the cost to them of finding information and making arrangements is higher. At the beginning of a destination's life-cycle these costs are greater and so most visitors will purchase package tours rather than gather their own information. As the destination matures and more people visit it, information becomes more readily available. People are therefore less likely to purchase a package tour. This trend has already occurred in the Hawaiian Islands. From 1974 to 1982 the number of visitors on package tours steadily declined from 42% to 24.1%. Also, the percentage of repeat visitors has increased from 35% in 1972 to 45.9% in 1982 (1).

The destination may choose to actively affect the amount of knowledge available of its facilities and attractions. If it is interested in attracting more independent travelers it should publish and distribute information as widely as possible. If, on the other

hand, it prefers to attract group tours, then information on facilities and attractions should be selectively distributed to the tour industry.

Since the number of destinations in the world is finite, and as people travel more and more, information about all destinations will become increasingly available. The rapid growth in the number of travelers with personal computers able to access distant data bases also makes information much more readily available. Videotex technology, which is now being installed in many hotels also makes the independent traveler's location of information much less costly at the destination (Sheldon, 1983). This has fundamental implications for the future of the tour operator industry. It implies that many consumers will no longer choose a package tour because the value of having information and transaction costs taken care of by tour operators is less. Instead, if the industry is to survive it must be able to provide the other two reasons why people choose a package tour rather than travel independently. These other two reasons have been shown in this dissertation to be group utility and price discounts. Speciality tours which offer group utility have begun to enter the market. Examples of these tours are gourmet tours, adventure tours, fishing tours and archaeology tours. They are able to offer group utility because similar tourists are attracted to these special tours, and so participants will value being with those of similar interests. Also, these tours are often able to provide special components

unavailable to the individual traveler. For example, a gourmet tour may include a tour of the kitchen of a special restaurant and a demonstration by the chef. An archaeology tour may provide access to a site which otherwise is closed to the public. It is expected that speciality tours will become more diverse and numerous in the future.

Speciality tours may not have to compete on price in the same way as regular tours do, because they have been shown to be price inelastic. For tour operators who choose not to offer speciality tours, price discounts will be increasingly important. It is reasonable to expect therefore that in the long run the tour operator industry will consist of two different kinds of firms; those offering speciality tours and those offering high volume tours with price discounts.

Footnotes

1. Hawaii Visitor Bureau, Annual Research Reports, Honolulu, 1972 - 1982.

Appendix A

PRICE ANALYSIS FOR BASIC TOURS

1. COMPANY: Tour operator A  
TOUR: Basic, 7 nights, 1983 brochure p.3.  
PRICE: \$379 double occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Round Trip Air Fare from Los Angeles	278
Airport Transfers	16
Breakfast	2
Lei Greeting	6.50
7 nights hotel	77 *
1 day car rental	11
Mai tai cocktail	4
Souvenir album	10
Dining checks	20
Subtotal	<hr/> 424.50
Tax (4%)	16.98
Total	<hr/> 441.48 <hr/>

\* The traveler has a choice of hotels even though the tour price remains constant. This rate reflects the cheapest possible hotel - The most expensive would be \$217 instead of \$77, representing a much greater saving by buying the tour.

2. COMPANY: Tour operator B  
 TOUR: Basic, 7 nights, 1983 brochure p. 4.  
 PRICE \$409, double occupancy.

<u>Component</u>	<u>Equivalent Retail Cost</u>
Round trip airfare from Los Angeles	278
Airport transfers	16
Lei greeting	6.50
7 nights hotel	140
1 day car rental (double occupancy)	11
Continental breakfast	2
Memory album	10
Mai tai cocktail and club membership	4
Subtotal	<u>467</u>
Tax (4%)	18.68
Total	<u>485.68</u>

3. COMPANY: Tour operator C.

TOUR: Basic, 7 nights, 'Pokole', 1983 brochure, p. 24.

PRICE: \$564 single occupancy.

<u>Component</u>	<u>Equivalent Retail Cost</u>
Airport Transfers	16
Lei greeting	6.50
Oahu Sightseeing tour	25
Flight bag	10
7 nights hotel (deluxe)	560
Subtotal	<u>616.50</u>
Tax (4%)	24.66
Total	<u>641.16</u>

4. COMPANY: Tour operator B.

TOUR: 9 nights, 3 islands, 1983 brochure p. 9. (PHW -C2)

PRICE: \$714 double occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Round trip airfare	278
3 nights hotel (Waikiki)	60
Lei greeting	6.50
Airport transfers	16
Breakfast	4
Memory album	10
Mai Tai cocktail	4
3 interisland flights	145.95
3 nights hotel (Kauai)	60
3 nights hotel (Hawaii)	60
6 days car rental	132
Subtotal	<u>774.45</u>
Tax (4%)	30.98
Total	<u>805.43</u>

5. COMPANY: Tour operator B.

TOUR: Basic, 10 nights, 2 islands, 1983 brochure, p. 5(PHW-G)

PRICE: \$679

<u>Component</u>	<u>Equivalent Retail Cost</u>
Round trip airfare	278
4 nights hotel (Maui)	140
Lei greeting	6.50
4 days car rental	44
3 interisland airfares	147.95
3 nights condo (Kauai)	120
3 days car rental	33
Memory album	10
Subtotal	<u>776.45</u>
Tax	31.06
Total	<u>807.51</u>

6. COMPANY: Tour operator D.

TOUR: Basic, 7 nights, economy

PRICE: \$469, single occupancy

<u>Components</u>	<u>Equivalent Retail Cost</u>
Roundtrip airfare	278
7 nights hotel (Waikiki)	280
Lei greeting	6.50
Airport transfers	16
Subtotal	<u>580.50</u>
Tax (4%)	23.22
Total	<u>603.72</u>

7. COMPANY: Tour operator D.

TOUR: Basic, 7 nights, superior

PRICE: \$539 single occupancy

<u>Component</u>	<u>Equivalent retail cost</u>
Roundtrip airfare	278
7 nights accomodation	336
Lei greeting	6.50
Airport transfers	16
Subtotal	<u>636.50</u>
Tax (4%)	25.46
Total	<u>661.96</u>

8. COMPANY: Tour operator E.  
 TOUR: Basic, 3 island escape, 8 days  
 PRICE: \$480 double occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Lei greeting	6.50
Airport transfers	16
3 nights hotel (deluxe)	93
3 interisland airfares	147.95
2 nights hotel (Maui)	95
4 days car rental	88
2 nights hotel (Kauai)	105
Subtotal	<u>504.50</u>
Tax (4%)	20.18
Total	<u><u>524.68</u></u>

APPENDIX B

PRICE ESTIMATES FOR INTERMEDIATE TOURS

1. COMPANY: Tour operator C.  
 TOUR: 'Vacation in Paradise', 12 nights, 1983 brochure p.18.  
 PRICE: \$1341 single occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Airport transfers	64
Lei greeting	6.50
3 nights hotel (deluxe)	240
3 nights hotel (Maui)	207
3 nights hotel (Hawaii)	165
3 nights hotel (Kauai)	195
Sea Life Park Tour	30
Iao Valley Tour	20
Glass Bottom Boat Cruise	10
Volcano tour	33
Wailua River cruise	7
4 interisland airfares	199.80
Subtotal	<u>1177.30</u>
Tax (4%)	47.09
Total	<u>1224.39</u>

2. COMPANY: Tour operator F.

TOUR: 10 nights, no food, 'Malihini', 1983 brochure p.5.

PRICE: \$635, single occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Airport transfers	48
Lei greeting	6.50
4 nights hotel (standard)	184
3 nights hotel (deluxe)	234
3 nights hotel (deluxe)	240
Pearl Harbor cruise	6
Car rental for 2 days	44
3 interisland flights	147.85
Subtotal	<u>961.35</u>
Tax (4%)	38.45
Total	<u>999.96</u>

3. COMPANY: Tour operator C.

TOUR: 'Plumeria', 1983 brochure, p. 22.

PRICE: \$1101 single occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Airport transfers	48
Lei greeting	6.50
Group picture	5.00
Breakfast	4.00
3 nights hotel (deluxe)	240
3 nights hotel (Kauai)	312
4 nights hotel (Maui)	436
Pearl Harbor cruise	6
Wailua river cruise	7
Flight Bag	10
Subtotal	<u>1142.50</u>
Tax (4%)	47.50
Total	<u>1187.00</u>

1. COMPANY: Tour operator B.  
 TOUR: 4 islands, 1983 brochure p.13  
 PRICE: \$829 double occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Roundtrip airfare	278
2 nights hotel (Waikiki)	60
Lei greeting	6.50
Airport transfers	16
Breakfast	4
Memory album	10
Mai Tai cocktail	4
4 interisland flights	196.85
2 nights hotel (Kona)	55
2 nights hotel (Maui)	52
1 night hotel (Kauai)	25
5 days car rental	55
Captain Cook cruise	20
Wailua river cruise	7
Subtotal	<u>785.35</u>
Tax (4%)	31.41
Total	<u>816.92</u>

5. COMPANY: Tour operator G.  
 TOUR: 7 nights, 1983 brochure p.3.  
 PRICE: \$899 double occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Roundtrip airfare (Vancouver)	358
Lei greeting	6.50
Airport transfers	16
4 nights hotel (economy)	58
1 night hotel (Kona)	36
1 night hotel (Maui)	17
1 night hotel (Kauai)	19
3 continental breakfasts	9
Coffee	2
Pearl Harbor Cruise	6
3 days car rental	66
4 interisland flights	197.85
Flight bag	10
Subtotal	<hr/> 800.35
Tax (4%)	31.13
Total	<hr/> 831.48 <hr/>

APPENDIX C

PRICE ESTIMATIONS FOR INCLUSIVE TOURS

1. COMPANY: Tour operator C.

TOUR: 'Hawaiian Islands Deluxe', 12 nights escorted.

PRICE: \$1695 double occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Airport transfers	64
Lei greeting	6.50
4 nights hotel (deluxe)	240
3 nights hotel (Kauai)	156
2 nights hotel (Kona)	99
3 nights hotel (Maui)	164
12 full breakfasts	72
4 lunches	32
8 dinners	160
Danny Kaleikini Dinner Show	44
Monarch Room Dinner Show	37
Luau (plus transportation)	40
Pearl Harbor and Bishop Museum	16
4 interisland flights	199.80
Wailua river cruise	7
Helicopter trip	90
Hana tour	47
Glass Bottom Boat Cruise	10
Volcano tour	33
Tips	50
Subtotal	1537.80
Tax	61.51
Total	<u>1599.31</u>

2. COMPANY: Tour Operator H.

TOURS: Deluxe, escorted, 13 nights

PRICE: \$2141 single occupancy

<u>Component</u>	<u>Equivalent retail cost</u>
Airport transfers	40
Lei greeting	6.50
6 nights hotel (deluxe)	720
1 night hotel (Molokai)	90
2 nights hotel (Kona)	240
2 nights hotel (Kauai)	170
10 dinners	200
Monarch Room show	37
Farewell Dinner Show	40
9 lunches	72
12 full breakfasts	72
5 interisland flights	250
Pearl Harbor cruise	6
Polynesian Cultural Center and Island Tour	40
Molokai tour	25
Iao Valley/Lahaina Tour	20
Glass Bottom Boat Cruise	10
Helicopter tour	90
Wailua Boat cruise	7
Tips	50
Subtotal	<u>2167.50</u>
Tax (4%)	86.70
Total	<u><u>2254.20</u></u>

3. COMPANY: Tour operator F.

TOUR: Escorted, 11 days, 3 islands, 1983 brochure p.15

PRICE: \$1325 single occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Interisland Airfares	149.95
Lei greeting	6.50
Airport transfers	48
4 nights hotel (Maui)	440
3 nights hotel (Kauai)	264
3 nights hotel (Waikiki)	180
Breakfast	4
Glass Bottom Boat Cruise	7
Lunch	8
Helicopter tour	90
Oahu City tour	10.50
Dinner Show	37
Flight bag	10
Subtotal	<u>1259.45</u>
Tax (4%)	50.37
Total	<u>1309.82</u>

4. COMPANY: Tour operator F.

TOUR: Escorted, 10 days, three islands, 1983 brochure, p.14.

PRICE: \$945 single occupancy

<u>Component</u>	<u>Equivalent retail cost</u>
Interisland airfares	149.85
3 nights hotel (standard)	147
3 nights hotel (Kauai)	147
2 nights hotel (Kaanapali)	120
Lei greeting	6.50
Airport transfers	48
Breakfast	4
Pearl Harbor Cruise	6
Al Harrington Dinner Show	40
Lunch	8
Hanalei Valley Tour	20
Iao Valley/Lahaina Tour	20
Steak Fry Dinner	20
Flight Bag	10
Subtotal	<hr/> 822.35
Tax (4%)	32.89
Total	<hr/> 855.24 <hr/>

5. COMPANY: Tour operator F.

TOUR: Specialized 'Upbeat Tour', 1983 brochure p.7

PRICE: \$995 single occupancy

<u>Component</u>	<u>Equivalent Retail Cost</u>
Helicopter tour	90
Coral Sea tour	30
Hana tour(incl food)	60
2 picnics	15
2 car rentals	44
4 nights hotel (Kaanapali)	328
3 nights hotel (Poipu beach)	204
Interisland airfare	49.95
Lei greeting	6.50
Flight bag	10
Airport transfers	32
Subtotal	<u>869.45</u>
Tax (4%)	34.78
Total	<u>904.23</u>

**APPENDIX D**  
**Questionnaire on Package Tours to Hawaii**

First, would you kindly fill in the following?

1. Date of Arrival in Hawaii \_\_\_\_\_  
 Date of Departure From Hawaii \_\_\_\_\_
2. What was the last city you were in, prior to arriving in Hawaii \_\_\_\_\_
3. Hotels Apt. Hotels or Other Types Lodging In Hawaii:  

Island	Names of Hotels (or other lodging)	Date(s) of Stay
4. The Purpose of Your Trip (please check):  
 Pleasure \_\_\_\_\_ Business \_\_\_\_\_ Convention \_\_\_\_\_  
 Pleasure and Business \_\_\_\_\_ Other \_\_\_\_\_

Nightclub(s) \_\_\_\_\_  
 Sightseeing Tour(s) \_\_\_\_\_  
 Which Islands? \_\_\_\_\_  
 Other Features \_\_\_\_\_  
Please Specify

6. Please Fill In Below **Whenever** you buy any other pre-paid, inclusive packages for tours or other tourist attractions or events—such as Luau's, Sea Life Park, Boat Cruises, Polynesian Cultural Center Events, etc. Please be sure to put down the **dates** these packages pertain to.

Names of Tours or Packages	_____	_____	_____
Tour Operators or Organizations	_____	_____	_____
Dollar Amounts Paid	_____	_____	_____
Dates Packages Apply to	_____	_____	_____
Numbers of People Covered	_____	_____	_____
Main Attractions of the Packages	_____	_____	_____
What Meals Were Included	_____	_____	_____
Transportation Between What Islands Included	_____	_____	_____
Ground Transportation on Which Islands Included	_____	_____	_____
Other Features (Please Specify)	_____	_____	_____

**PREPAID TOURS**

5. Is your trip to Hawaii purchased on a Prepaid Tour Basis? YES \_\_\_\_\_ NO \_\_\_\_\_
- If YES: What is the Name of the Tour \_\_\_\_\_  
 Name of Tour Operating Firm \_\_\_\_\_  
 Amount You Paid For the Package \$ \_\_\_\_\_  
 Number of People Covered By Amount \_\_\_\_\_  
 Number of Days Covered By It \_\_\_\_\_  
 Is it a Group Tour? \_\_\_\_\_
- Please check what your tour to Hawaii included:  
 Transportation To and From Hawaii \_\_\_\_\_  
 Lodging \_\_\_\_\_  
 Transportation Between Islands \_\_\_\_\_  
 Which Islands? \_\_\_\_\_  
 What Meals, If Any \_\_\_\_\_

Source: Hawaii Visitor Bureau Expenditure Survey, 1980, p. v.

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