

**Selling Travel as Part of a Package: Implications for Transport Research**

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**Abstract:**

The selling of long-distance travel as a package has its origins in the latter half of the last century and the practice has been instrumental in turning travel into a consumer item. Packaging is found to be significant in the Australian airline market while the degree of concentration in travel wholesaling and air transport is high. Travel packaging can be characterised as "price bundling", a strategy which has been growing in popularity in competitive service sectors. This paper explores optimal business strategies that take advantage of bundling, but it is shown that there are implications for policy analysis and for studies of travel demand. The relevance of bundling in transport research is illustrated while noting that there has been a lack of attention to this subject. Opportunities for further research are suggested.

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## **Introduction**

Packaging of travel is a widespread and long-standing practice which has led to a considerable expansion of the airline and coach market and has influenced the distribution of traffic to particular destinations. The essential feature of a package is that several services are sold as a single bundle, usually at a discount when compared to buying the transport, accommodation, and other services separately. This bundling phenomenon has several important implications which do not appear to have been explored in any explicit way, if at all, by researchers working in transport or tourism. These include the satisfactory specification of demand models, the identification of optimal business strategies, and the development of regulatory and other government policies.

This paper examines the origins of travel packaging and considers its significance for Australia. Packaging will be characterised as "price bundling", a term which has evolved in the economics, management and marketing literature to describe pricing strategies adopted by firms to maximise profits when selling two or more products which have independent or complementary demands. One motive for adopting bundling is to use market power more effectively, especially when it is not possible to fully extract consumers' surpluses directly because of limited knowledge about consumer demand or because price discrimination is not permissible. In the past decade, though, bundling has become a popular marketing strategy in competitive service sectors where the motivation appears to be more one of exploitation of complementarities in production (economies of scope) and consumption. The paper examines these motives and interprets travel packaging in this context. It will also be seen that there are several variants of bundling which can be more or less appropriate given particular management strategies, and these can have different implications for policy analysis which might not be evident if the effects of bundling are not considered. Further comments will be made about travel demand analysis in the presence of packaging.

## **Origins and significance of packaging**

It is useful to reflect on how progressive technological breakthroughs in passenger transport have been exploited by (non-transport) entrepreneurs to create a commercial product, leisure travel, which is at variance with the image transport operators and planners tend to embrace for their services. Transport is conventionally regarded as means to an end; its demand is derived from some other need such as the daily requirement to attend work. It is not difficult to embrace journey purposes such as "visiting friends and relatives", "shopping" or "sport and recreation" within this framework, but it becomes progressively more difficult with holiday travel. Consider an extreme case, cruising; here the traveller might never leave the ship, the set of attributes of the mode might be sufficient reason for the consumer to decide to travel. Where the ship goes might be of considerable interest and importance to transport planners, but this will not necessarily have much of a role in determining demand. Some forms of travel packaging come close to this example.

Japanese honeymooners can travel to any destination, or perhaps stay at home. That they consider Australia a primary destination has much to do with the success of promotions and with tastes. A significant market segment such as this can be influenced to travel to a different destination through the product decisions of tour wholesalers. Exploring the motives of sellers of travel packages is a worthy pursuit.

In part, this theme can be pursued by noting the experience of the railways in the latter half of the last century. This new technology had an enormous impact on travel decisions and on urban form and it made travel cheaper and considerably quicker. Its popularity commenced an upward climb that continued until the private automobile eroded public transport monopolies from around the middle of this century. What was particularly interesting was that the railway managers concentrated their attention on point to point (purpose) travel. It took entrepreneurs of the ilk of Thomas Cook to seize upon the idea of selling cheap travel to the public as part of an experience. Cook's packages, at first, were nothing more than temperance meetings and picnics on a sufficiently large scale that he could charter entire trains in order to strike a bargain over rates with the railways. However, it was not long before he had popularised packages which contained transport, accommodation, meals, entertainment and, often, a guided tour. By the 1860's, he and others had pioneered mass tourism through packaging and, in the process, had stimulated the demand for long-distance (leisure) travel. The railway and shipping operators found it profitable to sell their capacity in bulk to wholesalers acting as tour operators.

The modern era of travel has its origins in the 1950's. The rising popularity of the motor vehicle fostered independent travel at the expense of the railways, but the tour industry gained an impetus when commercial aviation became viable. In the UK, even small travel agents proved that it was possible to charter aircraft and to develop profitable packages at competitive prices. At that stage, the scheduled airlines were not particularly interested in the charter market or in offering discounts to the travel industry for group travel. Nonetheless, the tour wholesalers and agents made it possible for airline travel to record strong growth, even though the air package tour industry was in its infancy. As aircraft became larger and offered economies of size, there was less and less scope for small agents to survive. Specialist tour wholesalers grew larger and the industry proceeded through a standard industry life cycle; some now argue that it is at a "mature" stage with the product characterised as undifferentiated and suppliers compete mainly on price.

As they grew, the tour wholesalers pursued various strategies including vertical integration exemplified in moves by tour operators to buy into the charter airlines and hotel industry in destination countries. Successful packages tended to tap large northern European markets attracted to destinations scattered around the Mediterranean. By 1986, there were more than 10 million people travelling abroad from the UK on a package and, although the rate of growth of packaged travel appears to be declining in that market, it has been tending more towards long-haul destinations (Pearce 1987, Beachey 1990). It is in the Asia-Pacific region that the airlines anticipate the strongest growth following the trend started with the boom in outbound Japanese travel throughout the 1980's and early 1990's, a market dominated by strong tour wholesalers (Bailey 1988). In the USA, it has been claimed that one-third of all travel abroad is undertaken on some form of package (Sheldon and Mak 1987).

It is difficult to establish precisely how important packaging is for Australia because information is limited. The charter flight industry has played a negligible role in international aviation and tour operators have had to rely on deals struck with the scheduled airline operators. Although competition among the airlines, in general, appears strong, it is notable that two carriers, Qantas and Air New Zealand, carry over 50 percent of all international traffic. These same two carriers have strong links with the two dominant tour wholesalers, Jetset and Jetabout, the latter being entirely owned by Qantas. These airlines and travel wholesalers have greater influence over resident travel, a small market by world standards.

Jetset, the market leader, claims that fully inclusive tours have declined from 25 percent of its total sales in 1986 to 10-15 percent in 1990, and these are mainly concentrated on nearby destinations (eg Fiji, Bali, Thailand) or on coach tours of Europe. The tendency now is to buy an air ticket and then to choose from a selection of accommodation and tour arrangements (King 1991). Some information on international visitors' use of packages is available through the *International Visitor Survey* (Bureau of Tourism Research). According to this source, 27 percent of all international visitors to Australia in 1990 were found to be travelling on a form of inclusive travel package, but it is notable that 74 percent of all Japanese visitors used packages. Over 40 percent of all visitors who stated they were on holidays also said they travelled on a package. So, packaging is present in the international travel industry to a significant degree with some important segments dominated by the practice, and a notable feature is that industry concentration tends to be high.

Turning to the domestic market, airline travel represents only a small proportion of the total long-distance travel market. Under the two-airline policy, Ansett Airlines and Australian Airlines focused their main attention on the business traveller and the travel industry had expressed the hope that deregulation would result in the type of discounts which would have made it profitable for them to develop and promote packages. Both domestic airlines have their own travel divisions with powerful distribution capabilities, and they have extensive ownership and other linkages to resorts, hotels, rental car companies, coach operators and regional airlines.

Data on packaged travel are not readily available, but it has been reported that 7.5 percent of Australian Airline's total passenger traffic is carried on a package. Ansett Airlines reports selling 100,000 packages each year, yielding 10 percent of its revenue, and the Queensland Tourist and Travel Corporation, arguably the most successful of the state organisations, claims to sell another 80,000 to 100,000 packages each year (King 1991). Overall, the total market for packages has been perceived to be small, especially when the airlines have been prepared to make substantial discounts available on their seats for independent travellers. The trend has been towards purchase of an airline ticket and selection from a wide variety of accommodation and tours as "add-ons". With airline deregulation and the entry of Compass, the situation has been, if anything, exacerbated. Compass pursued a strategy of discounting air fares and then made it possible to add other travel requirements at special rates.

Reflecting on these observations, packaging is present in significant proportions in airline travel markets, though it appears less prevalent in the domestic context. Despite this, there is little evidence of serious research effort devoted to understanding the phenomenon. In particular, there is a lack of empirical analysis of the extent of packaging,

and the number of serious attempts to understand the motivation behind packaging is surprisingly small. The travel industry has embraced packaging from the outset but there have been almost no attempts to evaluate packaging and package pricing strategies. Furthermore, the implications of packaging for traditional demand forecasting and travel demand analysis remain unexplored. Given this situation, there is value in examining the practice of packaging (bundling) in its broader context as a marketing strategy. We now turn to the management literature on the subject.

### Packaging as a business strategy

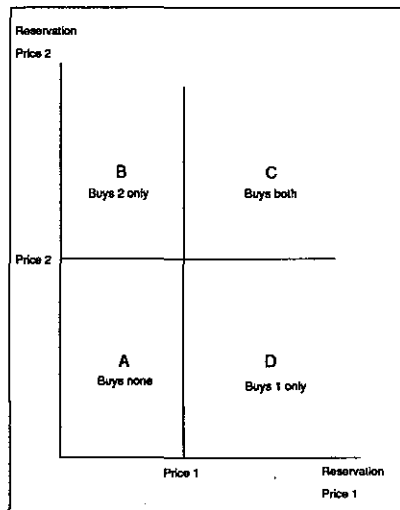
The early interest in price bundling focused on its use by monopolists in extracting consumers surplus. To understand this practice, let  $R_i$  be the maximum amount person  $i$  will pay in order to consume one unit of product  $j$ , in economic parlance this is a *reservation price*. In competitive markets, a single price prevails for a given product in equilibrium, and given a distribution in reservation prices among individuals, some consumers will be just satisfied enough to purchase while others will enjoy a surplus. Those enjoying a (consumer's) surplus would have been prepared to pay more than the prevailing price. In contrast, a monopolist possessing a full knowledge of the reservation prices would extract all of this surplus by setting different prices for individual buyers of the same product (first degree price discrimination). This is always the most profitable option provided sufficient information about consumers' valuations is available and if there are no laws or other penalties discouraging this type of behaviour.

In practice, there are limits to the use of price discrimination because the practice is not permissible or because the monopolist does not have sufficient information about the reservation prices of individual buyers. Now consider a monopolist who also can sell a second product. If both are sold under monopoly conditions, then one strategy is to price each one independently in a *pure components strategy*. An alternative is to require purchasers of product 1 to also buy product 2 (*tie-in sales*). More generally, the two might be offered for sale as a bundle available at a single price, usually at a discount. A choice then has to be made between offering the bundle alone (*pure bundling*) or selling each of the products on their own in addition to the package (*mixed bundling*). What, then, are the expected gains from bundling? Following Adams and Yellen (1976), this can be explained by taking a straightforward case.

Complementarities, either on the production or consumption side can be a motive for bundling, but by assuming these do not exist it can be shown that other motives are important. Thus, let costs be additive, likewise with reservation prices, and assume there are no fixed costs. Also, we will assume that the consumer places no value on a second unit of either product are each zero. Given these conditions, the mixed bundle will be purchased only if it is offered at a discount. With two goods, we can envisage that there will be a distribution of consumers in "reservation price space". That is, individual consumers would be distributed as a scatter of points in Figure 1 which has the reservation prices on each of the axes. Suppose that the monopolist must now set a single price in

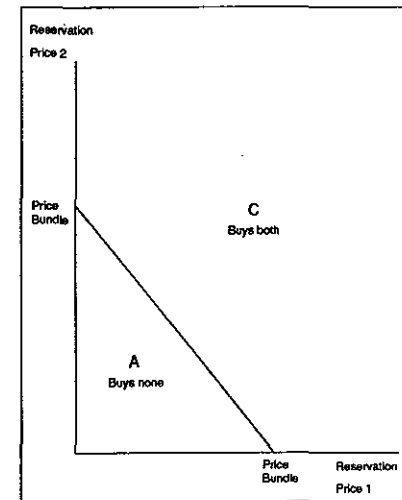
each market (price discrimination is not possible). In effect, this divides the market up into four segments. In segment A, no consumer will buy either product because the price is greater than their reservation prices. In segment C, both products will be purchased, while segments B and D include consumers who buy only one product.

**Figure 1 Pure components strategy**



Now assume that the monopolist pursues pure bundling. Figure 2 shows that this results in two segments: those that buy neither and those that buy both (segments A and C). Whether this is more profitable than the pure components strategy depicted in Figure 1 depends on the distribution of consumers in reservation space and on costs of production.

**Figure 2 Pure bundling strategy**

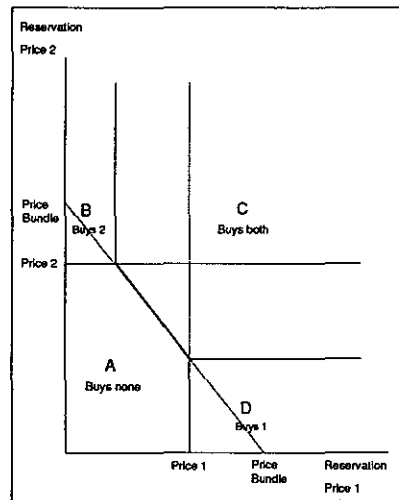


A mixed bundling strategy is illustrated in Figure 3. Again there are four segments, but they differ from those under a pure components strategy and, as before, there is a possibility that profits can be increased. Though this can be investigated empirically for any particular situation, it is possible to make some generalisations. It can be shown that mixed bundling is more profitable than pure components pricing whenever the individuals do not, in general, simultaneously value both goods highly. There are normative issues at stake here as well because bundling can result in too much or too little production (allocative inefficiency), and it can place consumers in a position where gains can be had from trading (distributive inefficiency). Thus, the deadweight losses of monopoly could be understated, or at least misunderstood, if the implications of price bundling are not considered.

One way of describing price bundling is to say that it succeeds by "transferring" consumer's surplus from one product to another (see Guiltinan 1987). This makes it clear that the practice has consequences for traditional welfare economics analyses. Further, hedonic price indexes might require careful interpretation when it can no longer be assumed that prices paid for varying degrees of quality reflect differences in reservation prices (especially if the decision to offer a luxury model together with a basic model of the same product is viewed as a bundling strategy). It has been argued that producers have an incentive to sell commodities of higher quality even when consumers are not prepared to pay for it (Adams and Yellen 1976). Note that the bundling interpretation can be extended

to some types of quantity discounts. When products are sold in various sizes, commodity two can be defined as an extra unit of commodity one when the first has already been purchased, and the seller can make bundles of different sizes available. For example, a frequent flyer on an airline can "buy" an additional flight as part of the "package" of regularly committing to the one airline system. In this case, the second product, a trip, is discounted very heavily (zero travel cost).

Figure 3 Mixed bundling strategy



Thus, when a monopolist is prevented from completely extracting consumers' surpluses, price bundling can be more profitable than other strategies. The general understanding has been that bundling can only be profitable if both products are sold under monopoly conditions (assuming no complementarities in production or demand). However, Carbajo et al (1990) have shown that price bundling can be profitable in markets that are neither perfectly competitive nor monopolistic. It is sufficient for the bundling strategy to make rivals less aggressive, perhaps by inducing the rival to charge a higher price (this can even result in an increase in rivals' profits), but it is also possible that rivals will reduce their prices. The success of the bundling strategy relies on the ability to gain an increased share of the oligopolistic market which is large enough to offset the reduced margin on sales. If complementarities in demand are now admitted, it is more likely that profitable bundling involves a reduction in the prices charged by rivals and the scope for profitable bundling is widened considerably. Hanson and Martin (1990) have shown that, if economies of scope are present, it might be necessary to bundle in order to remain profitable.

Price bundling has been becoming widespread in services marketing, a trend which is attributable to the existence of these complementary relationships. Guiltinan (1987) argues that these arise on the demand side because of reduced information and transaction costs, increased satisfaction from joint consumption, or image-enhancement effects. Pure bundling is only considered profitable in (rare) cases where one of the (service) components of the bundle is sold in a monopolistic market. However, depending on the nature of the complementary relationships, different pricing strategies can be pursued. One is *mixed-leader* bundling under which the price of one service is discounted conditional on the purchase of the other. Another variant is *mixed-joint* bundling which involves setting a single price when both are purchased.

Gaeth et al (1990) provide an additional line of research in examining the way consumers evaluate a bundle. Their starting assumption is that consumers form judgements about each product separately and then combine or integrate their judgements to arrive at their valuations of the bundle. An interesting conclusion of their empirical research was that quality had much the same impact on ratings for the tied or primary product, meaning that the quality of the tied product has a much greater relative effect on the valuation of the bundle. Furthermore, high quality products lost the most when bundled with a low quality, functionally related tie-in, and low quality products gained the most when bundled with a non-related tie-in. Clearly, there is a challenge here for researchers to gain a better understanding of the way consumers value bundles.

In general, it has been found that the success of bundling depends on sales volumes in the absence of bundling, relative profitability, demand elasticities, and the extent of complementarity. Recent advances in production and cost function estimation have made it possible to investigate economies of scope (complementarities in production) with more robust techniques (see, for example, Talley 1988). On the demand side, there are also powerful techniques capable, at least in theory, of being able to estimating the required demand elasticities and of providing insights into the reservation prices of consumers. In the following section we will see that, in practice, estimation of travel demand seldom achieves this level of success. Some promising lines of research are examined along with comments on several additional implications of packaging for transport researchers.

### Some implications of packaging for transport researchers

#### Business strategies

Several texts have been produced in recent years on airline management (see, for example, Doganis 1985 and Wells 1987). This author is unaware of any serious attention to the issue of packaging despite its historical significance in promoting airline travel. In other forms of long-distance passenger travel, little or no attention has been given to the subject. Yet the practice of bundling has been gaining greater significance generally in the

marketing of services. A few examples will suffice to demonstrate how bundling can explain marketing practices and contribute to our understanding of optimal business strategies of transport operations.

First, consider a strategy of *cross-selling* (the objective is to get consumers who buy only one product to buy both) in the context where a travel agent sells more airline tickets than accommodation. Here there are more opportunities to sell more accommodation to airline travellers than there are opportunities to sell airline travel to accommodation purchasers. In a cross-selling strategy, it would make sense to reduce the price of airline travel conditional on the purchase of accommodation. This observation suggests a motive for the airline's travel divisions in Australia to sell their airline tickets separately at a discount, but with add-ons provided. In general, a knowledge of sales levels indicates which price should be discounted and mixed-leader bundling is best when one-directional gains are being pursued. When sales levels are approximately the same, mixed-joint bundling makes it possible to pursue bidirectional gains.

Now reflect on the sources of complementarity in demand and, depending on the importance of information and transaction costs, utility of joint consumption and image-enhancement effects, different bundling strategies are suggested. For example, search and transaction costs can be relatively high for long-distance travel. A journey abroad might require travel on several airlines and booking accommodation, local transport and other travel requirements can be a daunting task for a frequent flyer let alone less experienced customers. Travel agents are specialists in providing advice on these matters, but the practice is for agents to be paid through commissions on sales rather than on a consultancy fee basis. This provides the agent with a contractual link to the service provider and the customer has to weigh up the advantages of shopping around for further information or of accepting a risk that a better service/price option has been foregone. Thus, accommodation, transport and other package elements complement each other because there are economies in purchasing them together. However, other sources of complementarity could be present. There are circumstances when the utility gained from travel will be greater when the components are purchased together. One example would be travelling on the destination country's national airline is considered to be a part of the experience. Image-enhancement effects also arise. An airline that can sell exclusive, luxury accommodation at the destination might enhance its own image.

It is conceivable that complementarity arises because the purchase of one product reduces the costs of gathering information about the other, but it is also possible that this type of complementarity works in both directions. For example, a consumer evaluating a travel package could readily obtain information about airlines and air fares, but it might be far more difficult to assess accommodation at the destination. The consumer might well adopt the attitude that the tour wholesaler or the airline responsible for putting the package together is in a good position to make the assessment of the accommodation component. So, purchasing air travel involves a reduction in the costs of becoming better informed about accommodation. Now consider air fares and car rental. Here, there might be bidirectional gains because information might be gathered from closely-related sources. Products that enhance customer satisfaction are likely to offer uni-directional gains whilst image-enhancing combinations tend to have bidirectional effects.

Guiltinan (1987) shows how these observations together with a statement of corporate objectives in terms of the importance of cross-selling versus gaining new customers or retaining existing customers leads naturally to the adoption of different bundling strategies. For example, one-directional complementarity is favoured for cross-selling. A mixed-leader strategy would be better in this case, for example, by selecting a bundling partner which enhances the utility of the lead product and/or selecting a bundling partner that gives the consumer reduced costs of information when purchased with the leader (which might also be offered at a reduced price). So, bundling accommodation with air travel might make it possible to sell more air travel. If bidirectional gains are required, mixed-joint bundling might be more appropriate.

Suppose that the objective is to generate new customers for both products (ie customers currently buy neither). If a mixed-leader strategy is adopted, the demand for the leader must be enhanced if its partner is a strong complement. It helps if the leader is price elastic. This is likely if the leader's attributes are of the type that can be searched and evaluated prior to purchase. In this case, a wider range of alternatives is likely to be considered so that demand for that product then becomes more responsive to price changes. An important consideration would be whether the second product produces search economies for the leader (either uni- or bidirectional). In a mixed-joint strategy, the customer can buy each separately or as a bundle. This could be successful if the reservation price of the bundle exceeded that of the sum of the reservation products to a sufficient degree; a price reduction for the bundle and an elastic demand also help. If, say, air travel and car rental have elastic demands (they tend to have search-based attributes) and their joint purchase reduces search costs of both, mixed-joint bundling might be worthwhile.

These examples demonstrate that deciding upon an optimal strategy depends on the particular conditions and upon the marketing objectives of the seller. However, the preceding comments dealt with demand relationships, and it is profits that matter ultimately. The gains to be had from bundling have to be offset against reduced profit margins from previous buyers of the separate services who now buy the bundle at a different profit margin together with the reduced margins from those people who already purchased both. In a cross-selling strategy, if the profit margins on the two services are different, the gains from bundling come from shifting consumers from the low margin service to the bundle. Under mixed-leader bundling, it is better to make the service with the lower profit margin the leader. With mixed-joint bundling, the strategy is more effective when sales levels are about equal and where profit margins are similar (see Guiltinan 1987). Note that, where new customers are being sought, it might be possible to quarantine the effect of a mixed-leader case, making the strategy more attractive than in the cross-selling case.

#### Policy analysis

The previous section illustrates possible motives and manifestations of bundling under different circumstances. At this point, we note the high concentration which exists in Australia in the airline industry and its related fields of travel wholesaling and distribution

pose potential issues of public policy. In this case, it might be necessary to consider whether price bundling is a subtle means of exercising market power. Travel packaging exemplifies bundling, but it is not by any means the only way the advantages of bundling strategies can be reaped in long-distance travel. For example, an airline can operate a single-class configuration or it can offer a basic service and one or more luxury standards as options. Airlines provide more comfortable lounges for some customers, either because they have joined a club or because they are purchasing the luxury version of the service. These, and other marketing initiatives, can be interpreted as forms of bundling. When, though, do they represent a conscious attempt to extract consumers' surpluses and when are they simply outcomes of market forces when supplying complementary products?

Provided a monopolist has sufficient information about buyers' reservation prices, first-degree price discrimination will be the most profitable course of action. Price bundling is an imperfect means of extracting consumer's surpluses but it can be an attractive alternative if there are barriers to price discrimination. For example, Kinberg and Sudit (1979) have claimed that:

*Bundling of air transport and ground tourist 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 cartelization.*

On balance, much of the motivation for bundling in long-distance passenger transport is likely to arise from the production and demand complementarities, but the high degree of concentration in the industry and the possibility of using bundling as a subtle means of exercising monopoly power are sufficient reasons to remain vigilant. Also, Carbajo et al (1990) have warned that one motivation for price bundling is to make rivals in oligopolistic markets less aggressive. For example, a large foreign airline capable of selling packages at low prices (perhaps because of its purchasing power) might be able to gain a larger share of the airline market through its bundling strategies.

If welfare economic arguments are raised, perhaps in the evaluation of aviation policies (see, for example, Findlay 1985), care must be taken in the interpretation of consumer's surpluses. In effect, bundling makes it possible to get consumers to "transfer" their surpluses from one product to another. For example, suppose that a consumer's reservation price for product one is greater than its market price, but that the reservation price for a second product is less than its market price. In an unbundled offer, this consumer would buy only the first product. However, when the two are offered for sale as a bundle, the consumer now compares the reservation price of the combined offer with the bundle's price. In this sense, the high consumer's surplus on one product can be "transferred" to the other; if the effect is strong enough, both products will now be purchased.

Bishop and Thompson (1992) examine the relationship between air fares and costs for charter airline services without raising the issue of packaging. However, the possibility of bundling adds another dimension to the debate on optimal pricing. For example, if there are shared production costs which cannot be allocated to each of the outputs in anything but an arbitrary way, and if there is a requirement to reach some profit or break-even target, economic theory suggests that a form of price discrimination might be a socially-optimal practice. In its simplest form, the prescription is to share the costs in inverse proportion to the elasticities of demand for each of the outputs. If elements of price bundling are also present, extensions of the theory might be necessary. One example where this might arise

is where an airline carries passengers and freight. The two products, passenger seat-kilometres and freight tonne-kilometres, are produced jointly. How much of the shared costs should be allocated, under optimal pricing, to passengers and freight can be prescribed according to this theory. But note that baggage is a part of the freight and it just so happens that it is bundled as a free add-on for passengers in most circumstances. This need not be the case, and it would be an interesting exercise to incorporate elements of bundle pricing theory with Ramsey optimal pricing in this type of situation. Practical application of the theory would require far greater attention to cross-price elasticities of demand than is evident in empirical work.

#### Travel demand analysis

The transport research literature includes numerous examples of attempts to analyse the demand for long-distance passenger travel. For instance, the Bureau of Transport and Communications Economics (1988) has produced demand elasticities (with respect to fares) for Australian international air travel. Oum and Gillen (1983) have estimated demand relationships for competing passenger modes in inter-city travel in Canada. More recently, Oum and Lemire (1991) have modelled destination choice of holiday travellers from Japan. The literature is extensive and varied, but there is little or no evidence that the phenomenon of packaging has been thoroughly analysed. An exception is Askari (1971) in estimating an aggregate demand model for package tours as a function of income, price per day and number of attractions per day using regression analysis.

Thorough reviews of the tourism forecasting literature are provided by Calatone et al (1987) and Morley (1991). Given the importance of packaging to the growth of tourism, especially in an international context, it is surprising that these show little evidence of interest by researchers in the subject. The transport literature often focuses on estimating price and income elasticities and on the influence of attributes of cost and time on choice of mode, whereas most interest in tourism has centred on choice of destination, although travel cost again figures as a key attribute determining choice. In many circumstances, tourism and transport researchers are interested in exactly the same phenomenon, the number of people arriving at a destination or facility (eg an airport). Most of the literature in both areas tends to be carried out at a highly aggregated level with crude variable definitions, and simple demand specifications.

Sheldon and Mak (1987) provide one notable exception. These authors investigated choice of package in a discrete choice context, an approach used widely in other transport planning contexts but rare in this particular application. The relevant decision making unit was regarded as the travelling party, and it was assumed that the party had chosen the destination and now was faced with the choice of mode of travel (ie package versus independent). Using data collected from holiday visitors to Hawaii from Mainland USA (40 percent travelling on a package), probability of choice was modelled as a function of consumer characteristics, trip attributes and modal attributes. Trip attributes included length of stay, and the number of destinations visited on the trip.

The probability of choosing a package was found to increase with the size of the discount on the package price, the age of the traveller and the number of destinations visited. The probability of travelling independently increased with duration of the journey, wealth of the traveller, size of party, and knowledge of the destination (ie repeat visitors). Changes in wealth and age had the greatest impacts on choice, followed by number of destinations, number of previous visits, and price differences had the least impact.

The finding on the influence of price is particularly interesting given the importance attached to this variable in aggregate transport and tourism demand models. If, as these results suggest, travellers are drawn to purchase packages depending on their personal characteristics and non-price attributes of the packages, doubt is cast on approaches using aggregate demand models which are not capable of discerning these influences. Admittedly, Sheldon and Mak took destination choice as given and "price" was defined in relative terms, but the approach demonstrates the value of using a behavioural choice model estimated on disaggregate data. If the price differential has a minor role in the decision to travel independently or to travel on a package, and if packaged travel represents a non-trivial share of the market, then care would need to be taken in modelling phenomena such as destinations visited, carrier or mode choice, and length of stay.

### Concluding comments

This paper was motivated by an interest in the significance of packaging in the travel industry. It was found to be a widespread practice, especially for international travel, and it has played a vital role in the development of a mass tourism market. Packaging evolved naturally in the travel industry for well over a century and it now takes many forms ranging from a fully-inclusive, organised tour to the offer of add-ons with a basic air fare. In general, packaging can be characterised as a form of price bundling, a marketing strategy which has become popular in the services sector since the 1980's. The growing literature in economics, management and marketing points to a number of motives for bundling. On the one hand, these involve the exercise of monopoly power, and on the other hand have to do with exploitation of economies of scope and demand complementarities. Price bundling has consequences for competitive and marketing strategies, policy development and the study of consumer demand.

As yet, there is little evidence that transport researchers have explored the implications of bundling even in such directly affected markets such as aviation and travel demand forecasting. Potentially, though, the bundling literature has relevance across a wide spectrum of transport topics. For example, consider some of the following questions:

would it be possible to deal more effectively with traffic congestion if the pricing of road use and parking were viewed as a bundling problem?

would it be possible to enhance the image of public transport, and hence demand/revenue, through appropriate bundling strategies?

is contract distribution a form of bundling, and if so what strategies are likely to make it more profitable for freight transport operators?

In general, there are theoretical pricing issues to consider. Daughety's (1985) review of the transport pricing literature reveals no interest so far by transport economists on the specific topic of price bundling, but there do appear to be some important implications where there are economies of scope, and the theory of setting optimal prices in the presence of joint and common costs would be a fruitful area for further research.

Assessing the impacts of a bundling strategy depends very much on a knowledge of the distribution of consumers in "reservation space", or more specifically it is necessary to know how consumers will respond to pricing and bundling decisions. As yet, few studies of long-distance travel demand have dealt with this matter, even when it is known that a substantial proportion of, say, international airline passengers are travelling on some form of package. This author is pursuing further research in the area (see Hooper 1992) by examining whether a packaging strategy would increase passengers and revenue on a (dormant) proposal to introduce a high-speed rail service between Sydney, Canberra and Melbourne. Key features of this work are that it builds upon methods employed in more conventional transport planning (see Gunn et al 1990) with an emphasis on discrete choice. Since the service represents a new product, a stated response approach appears to offer the most scope for empirical work, and a pilot study of 200 householders in Sydney has been conducted to provide a foundation for testing various approaches to modelling the demand for packaged travel. Again, the packaging/bundling phenomenon appears a significant one in some markets and transport researchers face a challenge in properly accounting for it in their analyses of demand.

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