

Expenditure Patterns of Singaporean Tourists in Malaysia

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ABSTRAK

Corak perbelanjaan pelancong Singapura ke atas produk pelancongan dikaji. Jumlah perbelanjaan isi keluarga didapati mempunyai pengaruh yang besar ke atas perbelanjaan pengangkutan, makanan, tempat tinggal, khidmat rekreasi dan cenderamata. Keanjalaan perbelanjaan bernilai 0.84 untuk barang makanan, 0.63 untuk pengangkutan, 0.79 untuk kemudahan tempat tinggal, 1.32 untuk perkhidmatan rekreasi dan 1.49 untuk barang cenderamata. Berdasarkan koefisien perbelanjaan pula makanan, pengangkutan dan kemudahan tempat tinggal dikategorikan sebagai barang perlu, manakala perkhidmatan rekreasi dan cenderamata sebagai barang atasan.

ABSTRACT

The patterns of expenditure on major tourist products by Singaporean tourists are analysed. The total household expenditure of the tourists is highly significant in influencing expenditure on transport, food, accommodation, recreational services and souvenirs. The elasticities of expenditure for the tourist products are 0.84 for food items, 0.63 for transport, 0.79 for accommodation, 1.32 for recreational services and 1.49 for souvenirs. Based on the expenditure coefficient, food, transport and accommodation are classified as necessities, while services and souvenirs tend to be considered as luxuries by tourists.

INTRODUCTION

In recent years tourism has been identified as an economic activity that contributes to the economic growth of tourist-receiving countries. In Malaysia, the position of the tourism industry as the third major foreign exchange earner in 1990 has made it one of the most important economic activities in the overall development of the Malaysian economy.

The estimation of tourism-related expenditure provides a basis for determining the economic consequences of tourism (Fritz *et al.* 1984). Therefore, the economic impact of tourism on a country's economy is often estimated through the expenditure behaviour of tourists (Henderson 1975).

A study by Abdul Aziz *et al.* (1990) examined the economic impact of tourism in terms of direct, indirect and induced income

and employment multipliers and technological linkages. It was established that the tourism sector has the potential to generate income in the national economy, especially through household expenditure, in addition to the induced-generating capacity of the manufacturing sector.

The study also pointed out that the implementation of tourism policies would generate a comparatively high level of employment in the following sectors: fishing, beverages, petroleum products and coal, air transport, business services and cultural services. Total employment multipliers in these sectors were greater than the national average. Consequently, any tourist expenditure in these sectors would eventually have a significant impact on employment generation in the national economy (Abdul Aziz *et al.* 1990).

Dardis *et al.* (1981) used a log linear multiple regression to estimate the relationships between recreational expenditure and several independent variables of US recreationists. The total household expenditure was proxied by the gross disposable income of the recreating household. They found that recreational expenditure was positively and significantly related to total household expenditure (gross income) with an elasticity of about 1.81. Several socio-demographic variables were also found to influence expenditure on recreation.

Based on the performance over the last several decades, there is evidence that the tourism industry will continue to grow worldwide. Coltman (1989) noted that the increase in leisure time had contributed greatly to the increase in tourism and that there was a high correlation between income and tourism and travel expenditure. Age is an important factor to be considered because it indicates the structure of a population; thus knowledge of the age structure of inbound tourists can help in determining the kind of tourism products and services a host country should provide. Travelling costs, occupation, and other demographic characteristics such as gender and marital status are determinants of tourist expenditure patterns (Bitta *et al.* 1977; Mak *et al.* 1977).

Singaporean Tourist Market

Singaporeans constitute the largest market among the ASEAN countries, making up 86.7% of the total ASEAN market to Malaysia (TDC 1991). Their arrivals in 1990 increased by 50.6% over 1989 (Table 1). Of the total arrivals to Peninsular Malaysia, 90% arrived by land. This was probably due to easy access via the causeway, thus inducing the large numbers of repeat visits as well as independent travel arrangements. Demographically, the Singaporean tourists could be narrowed down to specific target markets; more than half the visitors (59%) were male, most were young (25-39 years old), and their main purpose of visit was leisure.

A major factor contributing to the large influx of Singaporean tourists into Malaysia is

the ethnic and cultural links between many Malaysians and Singaporeans. From Table 1, it can be seen that family ties and friends play an important role in providing them with free accommodation. This is contrary to the expenditure pattern of most foreign tourists; accommodation is their highest cost. As shown in Table 1, even though 70% of Singaporean tourists stay with friends and relatives, only 39% came specifically for the purpose of visiting relatives and friends. This may mean that with leisure as the main purpose of their visit, most take advantage of staying with friends and relatives to minimize costs, enjoying free accommodation and even to a certain extent, food. On average, Singaporean tourists were found to stay 4.4 days in Malaysia, which was a considerable length compared to the average of 5.1 days for other foreign tourists.

Objectives of the Study

The tourism industry, like any other industry, needs comprehensive planning and management in order to succeed. The planning process could be made more effective if the exact characteristics and spending patterns of tourists in Malaysia were identified. Information from studies of expenditure patterns of tourists in the country can provide policy-makers with useful guidelines for planning the development of tourist products and programmes to meet the requirements of tourists.

The main objective of the present paper is to examine the expenditure patterns of Singaporean tourists who come to Malaysia.

Expenditure patterns are analysed in terms of the relationship between expenditure on various major tourist products and total household expenditure (gross income of the tourist household). In addition, various demographic factors significant to the expenditure patterns of tourists are included in the functional relationship to identify their impact.

METHODOLOGY

Data Collection

Collection of expenditure data from tourists is often very difficult due to widespread and pervasive distribution of tourists throughout

TABLE 1
 Characteristics of Singaporean visitors to Peninsular Malaysia

Item	1988	1989	1990
No. of visitors	2,305,898	2,432,720	3,663,679
Mode of travel			
Air	156,801	165,425	249,130
Land	2,068,391	2,182,152	3,286,320
Sea	20,706	85,143	128,229
Gender			
Male	1,360,480	1,435,306	2,161,571
Female	945,418	997,414	1,502,108
Major age groups			
Below 24	597,228	630,075	948,893
24 – 319	1,023,819	1,080,129	1,626,673
40 – 59	555,721	586,286	882,947
60 & above	129,130	138,230	205,166
Purpose of visit			
Leisure	1,219,820	1,286,910	1,938,086
Business	184,472	194,616	292,619
Family visit	901,606	951,194	1,432,974
Accommodation			
Hotels	769,499	783,334	1,179,705
Family/friends	1,536,399	1,649,386	2,483,974
Frequency of visit			
First visit	69,177	72,980	109,910
Repeat visit	2,236,721	2,359,740	3,553,769
Travel arrangements			
Tour package	219,060	231,107	348,050
Independent	2,086,838	2,201,613	3,315,629
Average length of stay	4.0	4.4	4.4

Note: 1 estimates based on 1985 pattern
 Source: TDC (1991)

the country. Most studies on expenditure patterns use sample surveys. It is important, however, to ensure that proper sampling techniques are used to select the samples as well as to use different weighing procedures because of the varied characteristics of tourists.

In this study, primary data was used to obtain the latest information on the expenditure patterns of Singaporean tourists. The primary data needed included information about spending and general characteristics of Singaporean tourists.

Tourist Survey

A modified mail survey was used to obtain information from a sample of the Singaporean tourists in selected hotels (including chalets,

rest-houses, and private boarding houses). For convenience, Malaysia was divided into five geographical regions. The northern region included Perlis, Kedah, Penang and Perak. The central region was made up of Selangor and Kuala Lumpur. Negeri Sembilan, Melaka and Johor made up the southern region. The east coast region covered Kelantan, Terengganu and Pahang, while East Malaysia comprised Sabah and Sarawak. The hotels were selected based on class and number of rooms in the individual geographical region. The list of hotels were obtained from TDC's publication "Supply of Hotel Rooms in Malaysia" (TDC 1991b). The hotels were classified thus: large hotels, those with more than 100 rooms; medium hotels, those with 50 - 99 rooms; small hotels, those

with fewer than 50 rooms. The total number of hotels sampled was 102, comprising 24 large, 17 medium and 61 small hotels.

Sample Size

Stratified random sampling based on "Statistics on Hotel Occupancy in Malaysia" (TDC 1991c) was used to work out the regional sample size of tourists. A total of 251 respondents were identified through the sampling, which covered only four of the regions sampled. The number of samples obtained is shown in Table 2. The sampling unit was a Singaporean tourist who was in Malaysia on a visit of at least 24 hours.

Structured questionnaires were used to obtain data on tourist profiles and expenditure patterns. The expenditure section aimed at capturing the total expenditure on goods and services over the expenditure period; this was defined as time from the date of arrival to the date of the interview or when the questionnaire was completed. The expenditure on services was categorized into accommodation, food outside hotels, travel costs within Malaysia, shopping and souvenirs, and services (private, business and personal). The data on purpose of tour, length of stay and accompaniment were obtained through the section concerning trip characteristics, while data such as occupation, gender, age, gross family income and marital status were covered in the tourist profile section.

Economic Model of Expenditure

Logarithmic models are often used in analysing the expenditure relationships because logarithmic forms often result in better statistical outcomes (Dardis *et al.* 1981). The model used here is a natural logarithmic model or the Engel curve function specified as follows:

$$\text{Log } E_i = \beta_0 + \beta_1 \text{ Log } TE_i + \beta_j \times ij + \epsilon_i$$

where: E_i = expenditure by Singaporean tourist i on tourist products

TE_i = total household expenditure of Singaporean tourist i as measured by gross monthly income

X_{ij} = other independent variables pertaining to Singaporean tourist i (gender, marital status, occupation, age)

β_0 = constant term

$\beta_1 - \beta_j$ = coefficients of the parameters

ϵ_i = error term

With the use of the Engel curve function the coefficients of the total expenditure will be its elasticity values. The influence of an increase of total expenditure (gross income) on each tourist expenditure category will be indicated by a positive (negative) value of the total expenditure coefficient. The coefficients of the other set of variables will indicate the influence of variables on each expenditure category.

The impact of the dummy variables (age, gender, marital status and occupation) is

TABLE 2
Samples of respondents by regions

Region	Large	Medium	Small	Total
Northern	14	17	31	62
Central	66	12	63	141
Southern	6	4	18	28
East Coast	2	3	15	20
E. Malaysia	—	—	—	—
	88	36	127	251

Note: large: more than 100 rooms;
medium: 50 – 99 rooms;
small: fewer than 50 rooms

examined in relation to each expenditure category. Since the dependent variable is in a logarithm, the coefficient will be transformed to obtain the anti-logs of the various coefficients. The resulting values will provide estimates of the percentage differences in demand for each dummy variable category (e.g. marital status vs. single status).

RESULTS

The OLS estimates of the expenditure patterns on various major tourist products are summarized in Table 3. The results indicate that expenditure on accommodation, food and local transport is relatively more significant than expenditure on services and shopping and souvenirs.

Expenditure on Accommodation

The F-test indicates that the three variables considered in the model have influences on the expenditure on accommodation. However, only the total household expenditure variable is highly significant. The three variables account for approximately 60% of the variation in the expenditure on accommodation.

The influence of the variables in terms of the signs are consistent with the findings of Mak *et al.* (1977), Dardis *et al.* (1981), and Fareed and Riggs (1982). When total household expenditure (gross income) of the tourists increases more will be spent on accommodation. The influence of occupation may have been accounted for by income due to correlation between the two variables.

As age increases the propensity to spend on accommodation lessens (Fareed and Riggs 1982). With fewer dependents (especially children), the non-nested visitors may reduce the priority of expenditure on accommodation facilities while on visits.

Expenditure on Food Outside Hotels

The final results indicate that three variables influence tourist expenditure on food outside hotels. This set of variables accounts for about 64% of variation in the expenditure on food. All three variables are positively correlated to expenditure on food. The relationships of gender and marital status and expenditure on food may imply that that male and married Singaporean tourists are more inclined to spend on food outside hotels. This may be

TABLE 3
Regression estimates of Singaporean tourist expenditure

Variable	Major Expenditure Items				
	Food	Accom	Local Trans.	Services	S & S
Constant	-0.632	-0.659	-0.089	-1.203	1.565
Log TE	0.840 (7.38)	0.785 (9.42)	0.631 (6.35)	1.324 (4.08)	1.488 (5.43)
Age		-0.062 (1.81)	-0.023 (1.41)	0.166 (0.76)	0.042 (1.03)
Marital status	0.066 (1.94)		-0.132 (1.75)	-0.215 (1.64)	0.056 (1.36)
Occupation		0.022 (1.34)	-0.076 (0.62)		
Gender	0.056 (1.43)		0.0854 (1.47)	-0.201 (1.57)	
Adj. R ²	0.642	0.594	0.565	0.408	0.234
F	18.49	23.12	11.80	3.96	3.86

Note: t values are shown in parentheses
TE is total household expenditure

useful information for restaurant and food stall operators running businesses in the vicinity of hotels.

Food outside hotels is relatively cheaper than food in hotels. However, personal service is lacking and it is relatively less safe and clean. The estimated results indicate that when total household expenditure or gross income of Singaporean tourists increases, they have the tendency to spend less on food outside their hotel.

Expenditure on Local Transport

Approximately 57% of the variations in transport expenditure are explained by five variables. Total household expenditure (TE) proved to be a highly significant factor in influencing expenditure on local transport. However, demographic variables (gender, age, marital status and occupation) are shown to be marginally influential. The accessibility of Malaysian destinations to Singaporean tourists by road may explain the lack of significance of the variables included. Furthermore, with the relatively higher standard of living among Singaporeans in general, most of them can afford to travel to Malaysia in their own vehicles. As a result, expenditure on local transport in Malaysia by Singaporean tourists, i.e. for buses, trains and air, is limited. Fareed and Riggs (1982) suggested that among elderly tourists, the propensity to spend on local transport was lower.

Expenditure on Services

The results reveal that expenditure on services is positively related to total household expenditure and age, although the latter variable is not highly significant. Other demographic variables (gender and marital status) are shown to be inversely related to expenditure on services, but their influence was less significant. The direct relationship between household expenditure and spending on services presents potential for the development of tourist and recreational services to attract more Singaporean tourists. Furthermore, as Coltman (1989) pointed out, visitors in the 25 – 39 year age group tend to spend

more on recreational services.

Expenditure on Shopping and Souvenirs

Relatively, the expenditure function for shopping and souvenirs produces the lowest level of goodness of fit; only about 24% of the variations are explained by the three variables included. However, the significance of total household expenditure as an influencing variable is consistent with the results found by Houthakker and Taylor (1970).

Coefficients of Elasticities of Expenditure

The economic implications of the tourist expenditure patterns can be gauged by looking at the coefficients of elasticities for each major item; the coefficient indicates whether the expenditure on each category is sensitive to changes in factors pertaining to it. Using the natural logarithm function, the coefficient of the total household expenditure (the elasticity value) is the response of the expenditure on a category due to a percentage change in total household expenditure. When total household expenditure is assumed to equal the family gross income, the coefficient of the variable indicates the response of the expenditure on each major item as a percentage change in the visitor's income.

The values of the elasticities of expenditure are 1.49 for shopping and souvenirs, 1.32 for services, 0.84 for food, 0.79 for accommodation and 0.63 for transport. This means that a 1% increase in total household expenditure of Singaporean tourists will result in a 1.49% increase in expenditure on shopping and souvenirs. An increase of 1% in total household expenditure will result in a 0.63% increase in expenditure on local transport; a 1.32% increase in expenditure on services; and a 0.79% increase in expenditure on food outside hotels.

The Engel curve can be used to classify goods into luxury, necessity or inferior goods (Deaton and Muellbauer 1980). The coefficients of the total household expenditure with respect to the expenditure on each item are used to define luxuries ($\xi > 1$) and necessities ($\xi < 1$). The coefficients for local transport, accommodation and food imply that these

products are considered necessities by Singaporean tourists whereas the coefficients for recreational services and souvenirs classify them as luxuries. The result is fairly consistent *a priori* since relative to transport, food and accommodation, souvenirs and recreational services can be viewed as luxuries. (The use of a single equation model, as in this study, results in loss of information on cross-elasticity).

Dummy Variables

The dummy variables used for the demographic characteristics (age, gender, marital status and occupation) are examined in terms of their significance to the expenditure on each major item. Since the dependent variables (expenditure on major tourism items) are in logarithmic form, each dummy variable coefficient is transformed so that the anti-logs of the various coefficients provide the estimates of the percentage differences in demand for each dummy variable relative to the omitted variable.

Married Singaporean tourists are found to spend about 14% more than singles on shopping and souvenirs. Further, the difference in spending on this item between the elderly and younger tourists is about 10% with the elderly spending more. Male, older and married Singaporean tourists spend slightly more on local transport than female, younger and single tourists (21% for males, 5% for the older age group and 35% for married tourists).

The survey of expenditure on services indicates that there are big differences in the spending patterns among the various tourist categories. Male tourists tend to spend about 59% more for recreational services than females, older tourists spend about 47% more than the younger ones while married tourists spend about 64% less than the singles. For accommodation, the older tourists tend to spend about 15% more than the younger tourists. The occupational difference does not seem to greatly affect the spending pattern of Singaporean tourists; wage-earners spend about 5% more than non-earners.

As shown in the results, only two socio-demographic variables are slightly influential

on the food expenditure pattern. Married and male Singaporean tourists are found to spend about 16% and 14% more respectively on food than singles and females.

CONCLUSION

The analysis of tourist expenditure patterns has significant implications for marketing strategy as well as for public policy on tourism promotion. The Singaporean tourist market is highly dominated by male tourists, with a fair distribution between married and non-married. Although there is no significant difference between the expenditure pattern of male and female tourists, the married spend slightly more on certain major items. Thus, supplying tourist products and services that cater for family vacations should be able to encourage more visits as well as spending by these groups of people. The majority of Singaporean tourists are in the 25-39 year age group. Their average annual gross income is S\$62,000. With leisure, vacation and business as the main purposes of their visits, they stay an average of 4.7 days in Malaysia.

A comparison of the coefficients of elasticities of expenditure proves instructive in revealing the sources of differences in the expenditure patterns of Singaporean tourists. Their expenditure patterns are affected highly by total household expenditure (gross family income) and, to a lesser extent, by several demographic characteristics such as age, gender, occupation and marital status. The results indicate that total household expenditure has a very strong influence on all the expenditure categories or major items (local transport, recreational services, accommodation, food and shopping and souvenirs).

The elasticities of total expenditure for food, transport and accommodation are found to be relatively inelastic ($\xi < 1$). The results imply that although total household expenditure as a proxy for gross family income affects the spending patterns of the tourists for these items, there is little change in their spending patterns with changes in total household expenditure. Based on the elasticity coefficients, transport, accommodation and food are classified as necessities by the

Singaporean tourists. Thus, in terms of pricing policy, a lowering of prices of these items may not increase demand for them; on the other hand, improvement and increased availability will help create more revenues by shifting the demand for them. Recreational services and souvenirs are expenditure elastic ($\xi > 1$), making them luxuries; thus it may be implied that adjusting prices of these items can increase revenue.

The information obtained from the survey can be used as guidelines in formulating programmes to encourage more spending on various major items by various groups of Singaporean tourists. For instance, improvement and increased availability of transport, accommodation and food outside hotel facilities would be more beneficial for the lower income Singaporean tourists. Providing up-market accommodation facilities would be more attractive to higher income Singaporean tourists since they prefer the accompanying in-house food and recreational services.

Because the study is confined to the analysis of total household expenditure and certain demographic variables, it is assumed implicitly that all Singaporean tourists spend on all the major items. It would be interesting to examine the impacts of other characteristics such as party size, length of stay and per capita daily expenditure on the expenditure of each of the major item. Such information would provide additional insights about changing patterns of expenditure on these major items, especially in relation to expenditure on souvenirs and recreational services.

It is noted that the scope of the study is limited to the data made available from questionnaires distributed only in hotels. This may have resulted in biases in the estimated coefficients since expenditures of other segments of Singaporean tourists are excluded, in particular, Singaporean tourists who are staying with friends and relatives. Additional research is needed to establish the competitiveness of particular products and services to be offered to Singaporean tourists as well as the way they should be organized in the market. Using functional relationships that take into account effects of changes of

tourist products on other items, that is, use of simultaneous techniques, will allow estimation of cross-price elasticities that may be useful to policy-makers.

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