

## **FACTORS DETERMINING THE DECISION TO TRAVEL DOMESTICALLY: A PRELIMINARY ANALYSIS WITH PENANG DATA\***

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*Pelancongan tempatan sedang berkembang dengan pesatnya di dalam kalangan sektor pelancongan Malaysia (Rancangan Malaysia Kelapan, 2001). Faktor-faktor yang mempengaruhi keputusan pelancongan tempatan telah ditinjau dengan menggunakan analisis tingkah laku dalam kalangan penduduk Pulau Pinang. Data dikumpulkan melalui pengagihan soal selidik dan Model Logit telah digunakan untuk menganalisis keputusan melancong di tempatan. Keputusan penyelidikan menyatakan satu pandangan umum antara perbezaan dalam kalangan penduduk Pulau Pinang yang menyertai pelancongan tempatan dengan penduduk yang tidak berbuat demikian. Keputusan ini dapat memperbaiki perancangan dalam sektor pelancongan dengan merujuk pada cita rasa dan pilihan penduduk Pulau Pinang.*

### **INTRODUCTION**

The Malaysian tourism sector has seen remarkable growth in the past few years. Foreign tourist arrivals increased at an average rate of 6.5% per annum during the period 1996 to 2000 (Government of Malaysia, 2001). In terms of expenditure, foreign spending in the country grew from RM9.17 billion in 1995 to RM17.3 billion in 2000. In contrast, the development of domestic tourism in Malaysia has been neglected historically, both in practice and in the literature. The emphasis of the Malaysian government on domestic tourism is recent. Only in the Seventh Malaysia Plan was domestic tourism promotion given attention through the introduction of "Cuti-Cuti Malaysia" (Malaysian Holidays).

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\* I wish to acknowledge the useful comments of two anonymous referees. Remaining errors are my responsibility.

To encourage domestic travelling (that would reduce capital outflow), the Government declared the first Saturday of the month as a holiday for the public service sector, effective from January 1, 1999. Later, the third Saturday of the month was also made a holiday, effective from February 1, 2000 (Government of Malaysia, 2001).

The recent terrorists attack on the United States World Trade Center and the Pentagon, as well as the current world political turmoil, have all dampened international tourism and added impetus to the emphasis on domestic tourism. Although tourists from the US accounted for only 1.3% of the total number of tourist arrivals in 1995 and 1.8% in 2000 (Government of Malaysia, 2001), the world political instability has resulted in an overall reduction of foreign visitors to Malaysia. The negative effects of these incidents have been particularly felt by the airline and hotel industries in Malaysia.<sup>1</sup> It was reported that total cancellations of hotel reservations for the month following the September 11 incident was 12,000 cases, and this affected primarily hotels with 3-star status or above. In general, the hotel industry has suffered as much as a 20 to 25 percent drop in business since September 11, 2001. Thus domestic tourism is being given an important role in reducing both Malaysia's dependence on foreign tourists and the impact of seasonality in the tourism sector.

Early national level studies of domestic tourism in Malaysia have only concentrated on the socioeconomic impacts, tourism development, and performance (Ismail, 1996). At the state level, most of the literature on Penang tourism was concentrated on the evaluation of tourism performance. Neither the national nor state level studies have focused on the demand for travel among local residents and the factors determining their decisions to travel domestically for leisure and holidaying. This study was a preliminary attempt to fill this gap.

The primary objective of the study was to identify the factors that determine the demand for domestic travelling for leisure or holidaying.<sup>2</sup>

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<sup>1</sup> See, for example, "Great Loss to Hoteliers in Malaysia" (2001). *Kwong Wah Yit Poh Press Bhd.* 14 October.

<sup>2</sup> Thus, travelling related to official business or for visiting friends and relatives has been excluded.

Identifying these factors could help policymakers to target particular groups in their campaign to encourage domestic travelling. In addition, isolating the factors that have a positive impact on the demand for domestic travel could assist in marketing domestic tourism packages more effectively. This preliminary study was restricted to Penang residents.

The paper is organized as follows: Section 2 describes the data sources and methodology. Section 3 summarizes the results of the survey and describes the logit model that is employed. Section 4, discusses the findings, while section 5 contains the policy implications of the study and its major limitations.

## **DATA SOURCES AND METHODOLOGY**

A structured questionnaire survey was conducted among Penang residents drawn from various ethnic groups, aged 16 years and above. Penang residents were defined as those who have been staying on Penang Island and the mainland for at least a period of 12 months prior to the date of survey. The data were collected from December 2001 to February 2002 from a sample of 536 respondents. Questionnaires were prepared both in English and Chinese.<sup>3</sup> Respondents were asked if they would choose to travel domestically in coming 12 months from the date of survey. Additionally, socioeconomic factors of the respondents were also recorded. The questionnaires were circulated personally and through the e-mail. However, the author did the collection of the questionnaires personally. Doubts that respondents had on questions were clarified at the time of collection.

The socioeconomic factors that affect the demand for recreation activities have been examined in many studies (Walsh et al., 1992; Luzar and Diagne, 1998; Parsons and Jakus, 1999). The dependent variable in these studies is usually dichotomous and measures whether the respondent participates in the recreational activity (value = 1) or not (value = 0). In such cases, the use of ordinary least square model violates the constant error variance assumption and produces inefficient

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<sup>3</sup> The sample questionnaire and complete set of data will be provided upon request.

estimators (Wrigley, 1976). Therefore, a binary choice model (Logit) is recommended. In a similar vein, the logit model was deemed more appropriate for this study on the factors that shape the demand for domestic travel.

The logit model can be written as follows:

$$\log \frac{P}{1-P} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon$$

where, P = the probability of travelling domestically for leisure or holiday over the next 12 months;

X = explanatory variables hypothesized to influence this probability. These explanatory variables are listed in Table 1;

$\beta$  = coefficients for the explanatory variables;

$\varepsilon$  = stochastic disturbance term.

Lacking previous domestic research materials on the subject, the selection of variables likely to affect the decisions of Penang residents to travel domestically relied on the studies by Luzar and Diagne (1998)<sup>4</sup>, Lee and Kim (1999) and Papadopoulos and Witt (1985). A brief explanation of the explanatory variables and the expected relationship with the decision to travel domestically is given below.

#### *Age (AGE)*

Age of the respondents in number of years is used in the model. Younger people are postulated to prefer travelling domestically, relative to older people. This is because the core attraction of domestic tourism

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<sup>4</sup> Age and education were not used in Luzar and Diagne's model to avoid the collinearity problem; however, they were used in this study. This is because the literacy rate in Malaysia is only 83% (*Nations of the World: Malaysia, 2001*), and the education variable is in dummy form, which divides the respondents to categories with and without tertiary education. Therefore potential bias due to collinearity will be avoided.

in Malaysia consists of nature-based activities and shopping which would invariably be more attractive to the young. A negative relationship between age and the decision to travel domestically is expected.

#### *Race (RACE)*

The race dummy variable takes a value of 1 for Chinese and 0 for the non-Chinese. It is included to allow the possibility that the cultural difference between the Chinese and non-Chinese might influence the decisions to travel domestically (Luzar and Diagne, 1998; Lee and Kim, 1999). Due to their historical background, the Chinese are expected to have a higher likelihood to travel domestically (or otherwise).

#### *Sex (SEX)*

This variable is a dummy that takes on a value of 1 if male, and 0, if otherwise. As mentioned earlier, most domestic tourist destinations emphasize nature and shopping. The likelihood of males choosing to travel domestically would be higher if nature-based activities are emphasized since males are generally more attracted to these, relative to females. However, if “shopping carnivals” are the main attraction, females are more likely to travel domestically. Thus, the expected sign of the coefficient could be positive or negative depending on the relative strengths of these two factors above. Thus if nature is more attractive, the coefficient will have a positive sign while the reverse would be true if shopping proved to be the stronger pull.

#### *Education Level (ED)*

Following Lee and Kim (1999), education level was used as one of the explanatory variables in decisions to travel domestically. A dummy variable is used in the study to divide the respondents into two groups. The dummy was assigned a value of 1 for those with tertiary education and a value of 0 for those without tertiary education. A positive relationship is expected between higher education and the likelihood of travelling. We expect those with tertiary education to be more willing to travel because of their better awareness of the attractions at tourist destinations.

### *Family Income (INCOME)*

The monthly family income (in *ringgit*) of respondents is included to account for the presumed positive impact of higher income on the decision to travel (Luzar and Diagne, 1998). When family income is high, there will be extra money for the family to travel. Hence higher income increases the likelihood of the family travelling.

### *Marital Status (STATUS)*

Instead of using the family size of respondents as done by Luzar and Diagne (1998), marital status is used in this study. The dummy is assigned a value of 1, if the respondent is single and 0, if otherwise. It is posited that preferences to travel domestically will differ between single and married persons. Married people are assumed to be more likely to travel domestically since many domestic tourist packages and destinations cater for the family.

### *Number of Rest Days Per Month (REST)*

The number of rest days is included in this study though this was not by Luzar & Diagne (1998). This variable attempts to see if the government policy of declaring the first and third Saturdays of the month as rest days for public servants has a significant positive impact on the decision to travel within the country. If it has a positive impact, the sign associated with the coefficient will be positive. It stands to reason that more rest days per week would facilitate short trips within the country.

### *Travelling Environment (TE)*

This study used cross sectional data, which were collected after the September 11 incident. A dummy variable is used to capture the impact of current world political uncertainty on the decision to travel (Papadopoulos and Witt, 1985). The dummy was assigned a value of 1 if respondents rated safety as an important consideration and a value of 0, if they did not.

If the respondents rated safety as an important factor in their decision to travel, then domestic destinations would be considered safer. This suggests that the likelihood of travelling domestically would increase

due to the recent unstable world political environment. However, if safety is not an influencing factor or if local destinations are also viewed as being unsafe, a negative relationship can be expected.

#### *Domestic Tour Price (PL)*

A dummy variable was used to examine if respondents considered the price of local tours as an important determining factor. The dummy was assigned a value of 1 if they did, and 0, if they did not. For the respondent who considers domestic tour price as an important factor in travel decision-making, the likelihood of travelling will have a negative relationship with price movements.

#### *Expected International Tour Price (PINTL)*

Due to the recent airline crisis, the international tour prices are expected to decrease in the near future (*Sin Chew Jit Poh, 2001*). Instead of using the relative prices, as in the study of Papodopoulos and Witt (1985), a dummy variable is used to capture of impact of international tour prices on the decision to travel domestically. The dummy is given a value of 1 if the expected decrease in international tour prices will have a negative influence on the decision to travel within the country, and 0, if otherwise. If respondents expect to react positively to the expected reduction in international tours, their likelihood of travelling domestically will decline. Thus, there would be a negative relationship between the international tour price variable and the decisions to travel domestically

The discussion above is summarized in Table 1.

Table 1: Explanatory Variables in the Statistical Model

Variable Names	Descriptions	Expected Sign
Age	Age of the respondents in years	-
Race	1 if Chinese; 0 is non-Chinese	+
Sex	1 if male; 0 if female	+/-
Education Level	1 if respondents with tertiary education; 0 if otherwise	+
Family Income	Monthly family income of the respondents in <i>ringgit</i>	+
Marital Status	1 if single; 0 if married	-
Number of Rest Days	Number of rest days per month	+
Travelling Environment	1 if respondents value as an important factor; 0 otherwise	+/-
Domestic Tour Price	1 if respondents value as an important factor; 0 otherwise	+/-
Expected International Tour Price	1 if respondents value as an important factor; 0 otherwise	-

## RESULTS

### Characteristics of Survey Respondents

Table 2 provides a comparison between those who chose to travel domestically and those who chose not to. Out of 536 respondents, 403 respondents (75.2%) indicated that they would travel domestically in the coming 12 months, while 133 respondents did not intend to do so. The general characteristics of the sample and sub-samples are discussed below.

The data show that the average age of those who chose to travel domestically was lower (around 26.7 years), than those who chose not to travel (29.4 years). The mean age for all the respondents was 27.4 years.



For those who chose to travel domestically, the age ranges from 16 to 71 years, while it ranged from 16 to 58 years for the other group.

Ethnically, Chinese dominated the total sample, accounting for 76%. The distribution of Chinese among those who chose to travel and those who did not was very similar as well. Thus, the ethnic difference was not obvious in the sample.

By sex, 42% of the respondents of the overall sample are male. There was a slight preponderance of males in the sample of those who chose not to travel (47%) relative to those who did (41%). This suggests that males may be less likely to travel domestically, although the difference is not very striking.

**Table 2 Descriptive Statistics of Variables in the Statistical Model**

Variables	Those who choose to travel domestically n = 403			Those who choose NOT to travel domestically n = 133			Total Sample n = 536		
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
AGE	26.7	16	71	29.4	16	58	27.4	16	71
RACE (dummy)	0.75	0	1	0.76	0	1	0.76	0	1
SEX (dummy)	0.41	0	1	0.47	0	1	0.42	0	1
ED (dummy)	0.60	0	1	0.40	0	1	0.50	0	1
INCOME	2368.66	200	12000	2876.3	300	55000	2494.6	200	55000
STATUS (dummy)	0.67	0	1	0.62	0	1	0.66	0	1
REST	6.77	0	18	6.27	0	12	6.65	0	18
TE (dummy)	0.44	0	1	0.46	0	1	0.45	0	1
PL (dummy)	0.78	0	1	0.77	0	1	0.78	0	1
PINTL (dummy)	0.51	0	1	0.53	0	0	0.52	0	1

Respondents who chose to travel domestically 403

Respondents who chose NOT to travel domestically 133

In the overall sample, 50% of the respondents had tertiary education. Those with tertiary education predominated among those who chose to

travel (60%) as compared to those who did not (40%), suggesting strongly that education may have a positive impact on the decision to travel domestically.

Contrary to expectations, the average monthly family income of those who chose not to travel domestically (RM2876) exceeded the mean income among those who chose not to travel (RM2369).

A somewhat bigger proportion of those who chose to travel domestically were single, relative to those who did not. About 67% of the former were single compared to 62% among the latter group. Thus, being married did not necessarily decrease the likelihood of travelling domestically.

The mean number of rest days per month is 6.65 days for the entire sample. This translates to approximately 5½ working days per week. The average number of rest days reported by those who chose to travel domestically (6.8 days) did not vary much from the mean reported among those who chose not to travel (6.3 days).

Travelling environment did not come across as being an important decisive factor in either group of respondents. Less than half of the respondents in both groups credited it with importance.

Domestic tour price did not come across as a critical factor to *only* the respondents who chose to travel domestically. In fact, an almost similar proportion in both groups viewed it as important in their decision to travel.

Again, the difference between those who valued the expected international tour price as an important factor in both samples was not striking. Slightly more than half of the respondents in both groups cited this factor as being important in their decision-making process.

### **The Logit Model**

Table 3 lists the summary statistics of the model. The last two rows present results of goodness-of-fit tests for the model. In the likelihood ratio test, the LR statistic of 23.49878 is higher than  $X^2_{.01,10} = 23.21$ . Thus, we reject the null hypothesis and conclude that the model fits the

data well. The Expected Prediction Table<sup>5</sup> showed that the model correctly predicted 75.9% of the outcomes in the sample.

Table 4 presents the marginal effect of each of the explanatory variables on the odds of choosing to travel domestically.

Table 3: Summary Statistics for Logit Model: Factors Determining Decisions to Travel Domestically

Independent Variables	Estimated Coefficient	Std Error	z-Stat	Prob. Value	
Constant	2.184844	0.8075	2.7058	0.0068	***
Age	-0.032277	0.0151	-2.1411	0.0323	**
Race	-0.128624	0.2522	-0.5099	0.6101	
Sex	-0.312494	0.2056	-1.4912	0.1359	
Education Level	0.631314	0.2281	2.7680	0.0056	***
Family Income	-0.000054	0.00003	-1.8539	0.0637	*
Marital Status	-0.691067	0.3259	-2.1201	0.0340	**
Number of Rest Days	0.054645	0.0556	0.9821	0.3261	
Travelling environment	-0.058412	0.2123	-0.2751	0.7832	
Domestic Tour Price	0.023551	0.2502	0.0941	0.9250	
Expected International Tour Price	-0.037928	0.2119	-0.1789	0.8580	

Likelihood ratio (10df)	23.49878
Probability (LR stat)	0.009048

- \*\*\* 1 percent level of significance
- \*\* 5 percent level of significance
- \* 10 percent level of significance

<sup>5</sup> The Expected Prediction Table may be obtained upon request, from the author.

Table 4: Marginal Effect on the Odds of Choosing to Travel Domestically

Independent	Estimated Coefficient $\beta$	Odds $e^{\beta}$
Constant	2.184844	8.8893
Age	-0.032277	0.9682
Race	-0.128624	0.8793
Sex	-0.312494	0.7316
Education Level	0.631314	1.8801
Family Income	-5.40E-05	0.9999
Marital Status	-0.691067	0.5010
Number of Rest Days	0.054645	1.0562
Travelling Environment	-0.058412	0.9433
Domestic Tour Price	0.023551	1.0238
Expected International Tour Price	-0.037928	0.9628

The results show that out of the 10 explanatory variables, only four (*age*, *education level*, *family income* and *marital status*) significantly affect the decision to tour domestically for leisure and holiday purposes in the coming 12 months.

The results confirm the expected negative relationship between decision to travel domestically and age. Growing older significantly reduces the likelihood to travel domestically. Other things being equal, a one year increase in age lowers the odds of choosing to travel domestically by 0.9682 times. The result appears to contradict the idea that people tend to travel for leisure and holiday towards the retiring age. This could be due to cultural characteristic of Asians, or this sample might be wealthier and therefore better able to afford to travel abroad instead of domestically.

The policy implication is that the potential market for domestic travel consists of those in the younger age groups, as individuals tend not to travel domestically when they grow older. As suggested before, more young people travel domestically because many domestic destinations

offer shopping and nature tourism. These packages are therefore more likely to coincide with the tastes of the younger generation.

This reasoning is also supported by other data collected in this survey, which indicate that the more popular attractions within Malaysia are the nature-oriented destinations of Pulau Redang (24%), and similar spots in Sabah and Sarawak (17%).

The level of education also appears to have a significant influence on the decision to travel domestically. The result suggests that, *ceteris paribus*, the odds of travelling domestically increase by 88% when a respondent has tertiary education as compared to one who does not (Table 4). Individuals with higher education levels may have a greater desire to know the country and are probably more adventurous. Education also reduces the inhibition to travel.

According data gathered during the survey, 56% of the tertiary educated respondents chose nature destinations, while 23% chose *shopping paradises*. The most popular destinations for respondents with tertiary education were Genting Highland (22%), Kuala Lumpur (18%) and Langkawi (16%).

Marital status of the respondents was a significant explanatory variable (at 5% level of significance). The negative sign of the estimated coefficient suggests that, *ceteris paribus*, the odds of travelling domestically fall by 50% if you are single (Table 4).

The likely explanation is that married individuals have different travelling preferences compared to single individuals. Due to family responsibilities, married individuals might prefer shorter trips and therefore domestic destinations would then be preferred. Besides, married people tend to have greater financial responsibilities compared to single persons. When married individuals plan to travel, they are more likely to consider bringing their family members along, and the expected travelling expenses would thus be higher. Therefore, married people tend to select domestic destinations for leisure and holidaying purposes.

The relationship between the decision to travel domestically and family income was significant (but only at the 10% level of significance). However, contrary to expectations, income had a negative effect on the

decision to travel domestically. This suggests a negative income elasticity of demand for domestic travel.<sup>6</sup> In addition, the result in Table 4 reveals that when family income increases by RM1, the odds of travelling domestically falls by 0.1%.

This negative income effect suggests that domestic travelling may be an inferior good compared to other alternatives. Hence, when family income increases substantially, other things being equal, there will be a higher tendency for individuals to travel abroad, as international travel becomes more affordable (Luzar and Diagne, 1998). This also implies that a higher national income may generate more capital outflows by way of travel abroad.

All other variables were not significantly associated with the decision to travel domestically. Nevertheless, they merit some discussion.

Race was negatively related to the decision to travel domestically, thus contradicting the *a priori* expectation that Chinese would have a higher likelihood to travel domestically compared to non-Chinese. The survey had revealed that only 29% of non-Chinese had travelled abroad before compared to 48% among the Chinese. Thus, the Chinese demonstrated a higher propensity to travel abroad. Yet the result of the logit exercise suggests that being Chinese did not exercise a separate and significant impact on the decision to travel domestically. This implies that once the effect of other factors are controlled for, being Chinese *per se* did not increase the likelihood of travelling domestically.

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<sup>6</sup> A Wald test was conducted on the effects of education and family income. It indicated that there is a difference between the education and family income variables on the decision to travel. A similar test was also run on the differences in the effects of age and family income. The results indicated that the 5% level of significance, there is a difference in the effects of age and family income in determining travelling decisions.

Whatever difference there was between the sexes with regard to local travel, it was not statistically significant. Nevertheless, the negative sign associated with the coefficient suggests that tourist destinations offering attractions dear to the hearts of women have a stronger influence in motivating domestic travel, relative to those sites catering to the interests of men.

When females were asked to reveal their preferences regarding travel destinations, 51% rated interest in *nature* as their first priority. Another 31% of the female respondents cited *shopping*, followed by 9% who were interested in *food*, and 7% who preferred *heritage sites*. Male responses, on the other hand, also showed *nature* to be the first priority (55%), followed by *food* (16%), *shopping* (12%) and *heritage* (12%). These results indicate that the “shopping carnival”, which is being promoted in the country, may attract more female travellers.

Although the coefficient of the number of rest days was not significant, the results suggest that its impact is nevertheless positive. The computed odds in Table 4 suggest that an additional day of rest per month will increase the odds of travelling domestically by 5.6%. Setting a 5-day workweek for all government servants, and the private sector may well have a small but positive impact on domestic tourism

Travelling environment too did not appear to be a significant determinant of domestic travel, although the negative sign suggests that it is likely to dampen the likelihood of domestic travel.

Although the domestic tour price variable was not significant, the positive sign associated with the coefficient implies that if domestic tour prices are seen as being reasonable, it will increase the likelihood of travelling domestically. Thus, setting tour packages at reasonable prices may encourage more people to travel locally. In a similar vein, the expected international tour price appears not to feature importantly in decisions to travel domestically although the sign of the coefficient is in line with *a priori* expectations. Thus, while domestic and foreign travel may have a substitute relationship it appears to be a weak one because these two types of travel probably attract different clientele<sup>7</sup>.

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<sup>7</sup> As published in Sin Chew Jit Poh (2001), after the terrorists' attack in September 11, 2001, the prices of international flight tickets were expected

## Marginal Effects on Probability of Travelling Domestically

The *odds* of travelling domestically may be somewhat more difficult to grasp and understand than the *probability* of domestic travel. Thus the marginal effect of each independent variable on the probability of local travel can has been computed (see Table 5). We first computed the probability of travelling domestically of the "typical" respondent who was assumed to be an unmarried Chinese female, with tertiary education and having the mean monthly family income (RM2495) and was enjoying the mean number of rest days per month (6.65 days per month). She was further assumed to value a stable political environment and to take into consideration both the domestic tour price and the expected international tour prices in arriving at her decision to travel domestically. The mean values obtained from the sample data were used (reproduced in column 2, Table 5).

Table 5 Marginal Effects of Probability

Independent Variables	Sample	Marginal Effects
Age	27	-0.0055
Race	Chinese	-0.0219
Sex	Female	-0.0532
Education Level	Tertiary	0.1075
Family Income	2495	-0.000009
Marital Status	Single	-0.1177
Number of Rest Days	6.65	0.0093
Political Environment	Yes	-0.0099
Price of Local Tour	Yes	0.0040
Price of International Tour	Yes	-0.0065

Fitting these mean values into the estimated equation yielded the log of odds of travelling domestically of 1.28 for this "typical" respondent.<sup>8</sup>

to be reduced by as much as 50%. This, in fact, has put potential travellers on hold in making travelling plans.

<sup>8</sup> The computation is as follows:



The corresponding probability of travelling domestically was computed to be 0.7824.<sup>9</sup>

The result suggests that an unmarried Chinese female, aged 27, with tertiary education, an average monthly family income of RM2495, access to 6.65 rest days per month, and who takes into consideration the political environment, domestic tour price and expected international tour price in her decision to travel has a 78.24% chance of travelling domestically.

How will a per unit change in any one of the independent variables, *holding all other variables constant*, impact on this probability? This marginal effect of each independent variable has been computed and is shown in column three of Table 5.

To illustrate, if the age of our “typical” respondent increases by one year, the probability of her travelling domestically would decrease by 0.55%, other things being equal.

It will be recalled that variables that had statistically significant coefficients were education, marital status, age and family income. Of these, having tertiary education and being married have the strongest (positive) impact on the propensity to travel locally. The (positive) marginal effect of increasing age and the (negative) marginal effect of rising incomes on the probability of travelling domestically are small.

### **Predicting the Probability of Travelling Domestically**

The probability of travelling domestically, based on different characteristics of a given respondent, can be computed using the results from the model (see Table 6). As before, the first prediction is computed for the “typical” single, Chinese female described previously. As noted

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$$\begin{aligned} \text{Log } P/(1-P) &= 2.1848 - 0.0323(27) - 0.1286(1) + 0.6313(1) \\ &\quad - 0.000054(2495) - 0.6911(1) + 0.0546(6.65) - 0.0584(1) \\ &\quad + 0.0236(1) - 0.0379(1) \\ &= 1.28 \end{aligned}$$

<sup>9</sup> The computation is as follows:

$$P(Y = 1) = \frac{\exp(1.28)}{1 + \exp(1.28)} = 0.7824$$

earlier, the model predicts that this “typical” respondent has a 0.78 probability of travelling domestically. However, if the respondent was a male with similar characteristics, the probability of travelling locally declines somewhat as is obvious from the table.

The negative impact of rising incomes on the probability of domestic travel is evident but seems negligible. If the typical single Chinese female described above had a higher income level (of say RM3495), the probability of travelling within the country falls from 0.78 to 0.77. On the other hand, if the typical Chinese female was older (aged 37 instead of 27), but retained all other characteristics described earlier, the probability of travelling locally declines more significantly. Similarly, if her age were younger (17, instead of 27), all other characteristics remaining the same, her probability of travelling locally increases appreciably (from 0.78 to 0.83).

Possessing tertiary education has a strong, positive impact in prompting local travel. This is evident from the fact that the typical Chinese, single female described earlier will have a lower probability of travelling within the country if she did not have tertiary education. In fact, the probability drops from 0.78 to 0.66. Marriage, too, prompts domestic travel. If the female respondent is married, but all other characteristics are retained, the probability of travelling domestically increases from 0.78 to 0.88.

In contrast, a single, non-Chinese female who shares other similar characteristics with our typical Chinese female respondent has a higher probability to travel to local destinations (0.80 for the former, as compared to 0.78 for the latter) This is because being non-Chinese was shown to increase the propensity to travel locally.

Table 6: Selected Predictions of the Probability of Travelling Domestically

No.	Characteristics	Predicted Prob.
1	Single, Chinese female, age 27, with tertiary education level, earns monthly family income of RM2495, enjoys 6.65 rest days per month, values political environment, domestic tour price and expected international tour price as important factors	0.78
2	<b>Married</b> , Chinese, male, age 27, with tertiary education level, earns monthly family income of RM2495, enjoys 6.65 rest days per month, values political environment, domestic tour price and expected international tour price as important factors	0.88
3	Single, <b>non-Chinese</b> , female, with tertiary education level, earns monthly family income of RM3495, enjoys 6.65 rest days per month, values political environment, domestic tour price and expected international tour price as important factors	0.80
4	Single, Chinese, <b>male</b> , age 27, with tertiary education level, earns monthly family income of RM2495, enjoys 6.65 rest days per month, values political environment, domestic tour price and expected international tour price as important factors	0.73
5	Single, Chinese, female, <b>age 37</b> , with tertiary education level, earns monthly family income of RM2495, enjoys 6.65 rest days per month, values political environment, domestic tour price and expected international tour price as important factors	0.72
6	Single, Chinese, female, <b>age 17</b> , with tertiary education level, earns monthly family income of RM2495, enjoys 6.65 rest days per month, values political environment, domestic tour price and expected international tour price as important factors	0.83
7	Married, Chinese, female, age 27, <b>without tertiary education level</b> , earns monthly family income of RM2495, enjoys 6.65 rest days per month, values political environment, domestic tour price and expected international tour price as important factors	0.66
8	Single, Chinese, female, with tertiary education level, earns monthly family income of <b>RM3495</b> , enjoys 6.65 rest days per month, values political environment, domestic tour price and expected international tour price as important factors	0.77

## **SUMMARY AND POLICY IMPLICATIONS**

In summary, four independent variables significantly explain decisions of domestic travelling amongst Penang residents. These variables are *age, education level, family income, and marital status*. There exists a positive relationship between the decision to travel and education level, while there was a negative relationship between the decision to travel and age, family income and being single.

Although the other variables were not statistically significant, the direction of their influence on the decision to travel within the country is worth noting. For example, the non-Chinese and females showed a greater likelihood of travelling locally. The number of rest days and favourable domestic tour prices influenced the decision to travel positively. On the other hand, doubts about the travelling environment and expectations of lower tour prices had a negative influence on domestic travel decisions.

The results of this study indicate that the potential market for domestic tourism is made up of younger, tertiary educated, married and lower income persons. They were also more likely to be non-Chinese, females who valued safer travel environments and were sensitive to tour prices.

Policy initiatives to encourage domestic tourism must focus on two broad areas: first, efforts must be made to tap fully the potential market. Second, the market needs to be broadened by encouraging more Chinese, more males and those with less education to travel locally.

The potential market is made up of non-Chinese, married women with tertiary education but not in the high-income category. The survey results reveal that the "shopping" is a big motivator of domestic travel. This aspect can be more fully utilized by giving greater publicity to unique shopping opportunities in different domestic destinations.

Since the safety aspect is given weight in travel decision-making, more attention and publicity must be given to the safety aspects of domestic travel. In addition, travelling insurances must also be included in domestic tour packages, to cover the risk of uncertainty.

Respondents with tertiary education levels have a higher probability of travelling within the country. This suggests that potential travelers would be receptive to interesting details about local destinations. The Department of Tourism should therefore consider producing more information-packed brochures, complete with attractions, maps, places to stay, and details on who to contact and how to contact them.

Married people were found to prefer domestic destinations. In view of this, more attractive family packages should be promoted to encourage domestic tourism. The number of rest days was positively related to the decision to travel domestically. Increasing the number of rest days may also encourage short trips, though the effect may not be very significant. Linking certain holidays (like the King's birthday) to prolong the weekend holiday may help to increase domestic travelling. The packaging of domestic trips should be designed to fit in with the number of days that people would like to spend holidaying. Ours study suggests that a standard trip averages between 3 to 4 days.

It was evident that the travel environment influences the decision to travel. Events like the terrorists' attack on September 11 and the kidnapping of tourists by the Muslim rebels in the Sipadan Island of Sabah impacted negatively on domestic tourism. The tourism industry is highly vulnerable to natural and human-caused disasters, including social and political crises. In view of this, promotional campaigns should reassure domestic travellers about the safety of Malaysian tourist destinations. Not enough attention has been given to this aspect in the past.

Our results suggest that domestic travel might be an inferior good for Malaysians. Thus, small changes in domestic tour prices may not produce substantial changes in the decision to travel locally. However, if domestic tour prices are not sustained at reasonable levels, this will make travelling abroad relatively cheaper; thereby reducing the likelihood of Malaysians travelling domestically. Due to the recent airline crisis and the prospect of lower international fares, domestic travel might face steeper competition. Rather than responding by way of a price competition, local tour promoters might consider competing in terms of services. The attitude of the people involved in the service sectors and the quality of service are very important in boosting domestic tourism. Satisfied domestic travellers would not only become

repeat visitors but might also function as a free promotion tool. Therefore, tour service providers at domestic destinations should cease discriminating between domestic and foreign tourists.

The lower propensity for the Chinese to undertake domestic travel was noted earlier. They may prefer to travel abroad, possibly because of their higher average income levels. To encourage the Chinese to travel more within the country, an intensive campaign designed to reach them should be developed. The tourism department may consider producing more travel guides and brochures in Chinese, place advertisements in Chinese media and set up signboards in Chinese to attract potential Chinese travellers.

In the same vein, more efforts must be made to make local destinations attractive to young men. Malaysia has great potential to develop nature-based and adventure-filled holidays. Not only must these be exploited fully, wider efforts to publicize them must also be made.

Finally, attempts to reach those with lower education need to be intensified. Radio and TV advertisements that depend primarily on audio and visual images may be an effective way to reach this group. Furthermore, including the names of important tourist destinations in all the promotion screens and signboards along the major highways may help people with lower education to become aware of these sites and locate them more easily.

Any campaign to encourage local tourism must begin with some understanding of the factors that motivate domestic travel. This study is only a small beginning to further research on domestic tourism in Malaysia and suffers from several limitations. First, the questionnaires were not personally canvassed. Hence, the accuracy of the responses depends on the individual understanding of the respondents. No doubt, personal interviews would have produced more accurate responses but would have required greater costs and time. Second, about 76% of the respondents were Chinese and this over represents this community's share in the Malaysian population. A distribution of ethnicity that more closely reflected the Malaysian case might have yielded "better" results.

Third, a *distance* variable was not included in the model due to the difficulties in collecting this type of data.<sup>10</sup>

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<sup>10</sup> Most research on travel focuses on particular destinations and therefore could include *distance* as an explanatory variable (see Silberman and Klock, 1986). The *distance* is usually the difference between the countries of origin of the respondents and the tourist spot visited. However, this study involved tourism to all local destinations, without specifying any particular one. Hence, distance was difficult to specify.

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**NEWSPAPERS**

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