

**PSYCHOGRAPHIC SEGMENTATION STUDY
OF SINGAPOREAN TOURISTS**



BY

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ABSTRACT

The psychographic factor with respect to the preferences and attitudes of Singaporean tourists going on vacation was examined in this thesis.

Factor analysis was conducted on 16 psychographic statements taken from Schul and Crompton (1983) who extracted them from Hay Associate (1978) which yielded 5 basic tourist typologies. These are as follows:

Explorer: Tourists who like to experience new culture, learn new things and experience local customs when they go on vacation.

Organised
Tourists: Tourists who preferred joining tours when they go on vacation.

Active
Tourists: Tourists who preferred to do many things during Tourists their vacation.

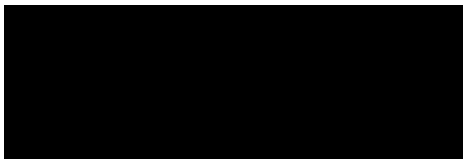
Pleasure
Seeker: Tourists who preferred to visit places based on what friends that have visited before. In addition seeking relaxation and staying in the best accommodation during their vacation.

Sophisticated
Seeker: Tourists who preferred active participation in a variety of interests whilst on vacation, especially night life.

However, based on the five identified typologies, Australia has a wide variety of attractions and interests to cater for these segments of tourists. The results provide an insight into Singaporean tourists going on vacation. In addition, the co-relation between psychographic and demographic data shows weak or no significant relationship.

DECLARATION

This study contains the original work of the author except where noted in the report. It contains no material which has been submitted for examination or award of any degree in any university



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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND TO THE RESEARCH

Reillys A. (1989:4) states that "Singaporeans are among the most travelled people in the world". Tan (1990:34) states that "Singaporeans these days are travelling more for pleasure than for business". Over, the last 10 years, the number of Singaporean tourists travelling to Australia has increased rapidly from 16,420 in 1980 to 116,800 in 1992(ABS catalogue 3404.0 table 2 & 3).

The objective of this study is to use psychographic statements to provide an insight of Singaporeans who will travel overseas. What are their preferences and attitudes toward travel? This study also attempts to analyse and classify these people into different typologies based on their travel psychographic statements using Factor Analysis. It also attempts to test the correlationship between five identified typologies and demographic data using hypothesis testing.

A considerable body of literature is reviewed including motivation for travel and psychographic segmentation.

This study is designed to explore the nature of Singaporean tourists by providing an initial stage of the finding.

1.2 THE PROBLEM

During the last 10 years, Australia has become a popular destination for Singaporean travellers. Singaporeans arriving in Australia have increased greatly from 16,420 in 1980 to 116,800 in 1992 (ABS catalogue 3404.0 table 2 & 3). This growth rate is very significant and plays an important role in contributing tourism dollars to Australian economy.

McMahon (1993:22) stated that "Australian Bureau of Statistics figures for 1992 showed dramatic changes in the market composition with Asia dominating the picture."

McMahon (1993:23) further explains that "The 30 per cent increase in total arrivals during 1992 disguised the even more impressive increase, 45 per cent in holidaymakers. The ATC is confident that increasing Asian affluence, Australia's proximity and aggressive marketing should ensure continued growth."

Thus, Australia's popularity as a Singaporean tourist destination grew rapidly. Therefore, there is a need to understand and identify what factors contribute to the growth of tourism in Australia from the Singapore.

It is imperative to understand through demographic and psychographic research, the type of Singaporean who chooses to go on vacation. According to "Insight" edited by Leone (1993:16), Asians are looking at Australia with renewed interest as a choice of destination, by the Australian Tourist Commission. Their finding illustrated that Asians once visited Australia mainly for fun in-the-sun and its glamorous cities. As a change of image, Asians are now visiting Australia for its different cultures and its open environment.

Westwood (1993:3) stated that "potential tourists from Singapore, Hong Kong and Malaysia remain to be convinced Australia is not a boring holiday destination." In addition, according to Westwood (1993:3), the Australian Tourist Commission's - Manager of Planning and Research, Mr. Godfrey Santer stated that Asian countries such as Singapore, Hong Kong and Malaysia, where international travel was considered a status symbol did not traditionally regard Australia as an exciting destination.

Therefore, the Australian Tourism Commission's General Manager Operations, Carole Hancock stated in Travel Week by McMahon (1993:14), that the key issue facing the ATC was to balance the need to develop new markets whilst continuing to nurture existing markets in the region.

McCabe (1993: 4) stated that the Australian Tourist Commission has focused on three key segment groups; "Cultural Discovery", "Fun-In-The-Sun" and "City Glamour" in order to overcome an image problem, as Australia was perceived as an expensive, bland, boring (without the status of Europe) and even racist tourist destination.

The objective was to promote Australia to different parts of the world.

McCabe (1993:4) reports that:

"According to tracking studies undertaken by the ATC last year, Australia is rated as the first or second most desirable country to visit in nine of the 13 markets addressed by the commission. There is a feeling that more can be done to translate this desire to visit into bookings.

Problems to be overcome include the "tyranny of distance" and related expense, and the persistence of outmoded perceptions of Australian as a destination.

But product design, development and distribution have also come under fire. Some products are being mis-marketed; others are poorly designed for their target audiences. Japanese travellers, for example, are shedding parts of their package tours, a clear indication the product is not in tune with their needs."

Van Raaj (1986:2) stated that "Consumer wishes and desires should constitute the basis for marketing strategies. Consumer preferences are partly dependent on what is available in the market and partly on what consumers consider to be "Ideal" product or service". Therefore market planners can work more effectively by understanding the market and the various segments.

William (1982: 254) also stated that marketers are changing their approach in analysing market segments by analysing the behavioural concepts such as attitudes, motives, and life-styles instead of conventional demographics such as age and socio-economical grouping.

Thus, with an increasing number of Singaporeans visiting Australia, it is important to analyse what their preferences are and identify what segments of the population can be classified into different typologies. In this way, marketing strategies can be developed to cater for Singapore market. Ooi (1992:44) stated that "The outbound Singaporean travellers are mostly from the upper and middle income families, singles and young professionals. The younger generation are generally the Free Independent Travellers as it is perceived to be cheaper and more adventurous. They preferred choices of holiday among young consumers who are active leisure oriented resort/golf holidays and soft adventure holidays with a quality destination experience."

Hence, it is imperative to study Singaporean tourists who go on a vacation. In this way, an understanding of the market, can be obtained for effective future marketing strategies. Marketing Strategies can be developed in terms of positioning versus the competitor, image, the target market, media advertising, promotion and so on. Therefore, in order to cater the characteristics of different markets, it is extremely important to identify the various segments of Singaporean travellers.

1.3 HYPOTHESIS

The validity of the present study is based on the early studies by researchers (Schul and Crompton, 1983) when suggested that search behaviour was better explained by travel-specific psychographics rather than the use of demographics.

Thus, the psychographic variables for psychographic segmentation were adapted from Schul and Crompton (1983:25) who in turn adapted them from Hay Associated. (1978)

However, based on travel market segmentation in this industry, the following assumptions have to made in this finding.

- * Due to the different demographic and psychographic characteristics of tourists, their needs and demands will vary accordingly.
- * Tourists come from a heterogenous population.
- * A market segmentation can be developed and identified based on similar characteristics.

Based on these assumptions, Singaporean tourists travelling abroad will be classified into different typologies or groups (segment) according to their psychographic statements and each typology or group (segment) will be correlated to the socio-demographic data in terms of "Sex", "Age", "Marital Status", "Education" "Annual Total Income" and "Information Source".

Five factors are being hypothesised to test the correlation. Each factor illustrates a segment of tourists, having statistically related responses with respect to psychographic factors. It was obtained by measuring the differences in the travel psychographic variables formed from factor analysis. Each factor was given a name, for example, Explorer.

Thus, the followings hypotheses were set:

FACTOR 1 - EXPLORER

Hypothesis 1

Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Explorer.

H : That there is a difference.

I

FACTOR 2 - ORGANISED TOURISTS

Hypothesis

Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Organised Tourists.

H : That there is a difference.

I

FACTOR 3 - ACTIVE TOURISTS

Hypothesis

Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Active Tourists.

H : That there is a difference.

I

FACTOR 4 - PLEASURE SEEKER

Hypothesis

Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Pleasure Seeker.

H : That there is a difference.
I

FACTOR 5 - SOPHISTICATED SEEKER

Hypothesis

Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Sophisticated Seeker.

H : That there is a difference.
I

1.4 THE OBJECTIVES OF THE STUDY

In this research, the concept and application of psychographic segmentation has been used to develop an understanding of Singaporean tourists going for vacation.

As the literature review illustrates, many schools of thought used this application in tourism research, such as Schul and Crompton (1978) in their study of Psychographic Segmentation of Tourists.

The objective of this study is to use psychographic statements to provide an insight into Singaporeans travelling abroad.

It also attempts to analyse and classify these people into different typologies based on their travel psychographic statements using Factor Analysis. It also attempts to test the correlations using hypothesis testing.

In applying the approach of psychographic study, this study attempts to provide an understanding of Singaporean tourists. Schul and Crompton (1983), stated that this approach allows marketers to visualise the tourists they are trying to reach.

This study will finally provide recommendations for public and private travel sectors interested in the Singapore travel market.

1.5 JUSTIFICATION FOR THE RESEARCH

Ooi (1992:40) stated that "Singapore's strong economic growth has created a dynamic consumer society. With high levels of disposable income, Singaporeans are pursuing a more sophisticated lifestyle in which holiday travel is a growing trend."

As shown in Table 1, Malaysia was the Principal destination of Singaporeans travelling abroad, 1990-91.

TABLE 1
Principal Destinations of Singaporeans Travelling Abroad - 1990/1991 ('000)

Destination	1990	1991	% Change
ASIAN NATIONS			
Indonesia	621.1	710.7	14.4
Malaysia	4,535.4	3,230.6	-28.8
Philippines	19.3	15.7	-18.7
Thailand	335.7	320.1	-6.6
ASIA			
Hong Kong	200.9	229.4	14.2
Japan	43.0	42.9	-0.2
Taiwan	59.5	...	...
Korea	26.3	30.2	14.8
Sri Lanka	5.2	4.2	-19.2
Australia	75.9	...	...
UK	64.0	50.0	-21.9
NORTH AMERICA			
USA	53.6	57.3	6.9
Hawaii	16.0	13.5	-15.6
Canada	18.6	18.3	-1.6

Source: National Tourist Organisations

According to the above table, in 1990, Singaporeans preferred Australia as a tourist destination in comparison to UK, USA, Canada, Japan, Taiwan and Korea. Further details concerning Singaporeans travelling to Australia will follow.

SINGAPORE - THE MARKET FOR AUSTRALIA

Doman (1993:45) states that Singapore's economic advancement is a success story.

"Singapore is Australia's third largest export market - albeit as a result of heavy Singapore demand for Australian gold, which accounts for around half of the \$3.7 billion export flow to the city state during 1992. But there has also been healthy growth in Australian processed and unprocessed food shipments to Singapore, with high value added manufacturing exports also increasing".

Osborne (1992:34) states that "Singapore remains Australia's most important Asian market and fourth largest export market after Japan, the US and Korea".

Tourism in Australia is seen as very attractive to Singaporeans and Australias rise in popularity also coincides with a large investment in Australia over the recent years. Mitchell (1993) revealed in his survey of foreign ownership in Australia's tourism industry that Singaporean investors were the "biggest players" in 1992.

Mitchell (1993) further purported that these findings dispelled the myth that the industry is dominated by Japanese money. It was found that by 1992 that the South East Asia investor accounted for nearly 80% of international investment in Australia's tourism property with Singapore providing almost 23%.

Mitchell (1993) states that Singaporean investors were Victoria's best clients, purchasing eight properties at a total value of \$92.97 million followed by Hong Kong which obtained five properties for \$92.97 million in 1991. Opportunities for Singaporeans to invest in properties in Australia also boosts the tourism industry.

SINGAPORE OUTBOUND MARKET

McMahon (1993:22) stated that "Australian Bureau of statistics figures for 1992 showed dramatic changes in the market composition with Asia dominating the picture. More than 1.1 million visitors or 40 per cent of the total figure of 2.603 million, came from Asia, with Japan alone supplying nearly 25 per cent of the traffic." However, other Asian markets grew rapidly such as Singapore which showed a 30% growth rate.

Over the last 10 years, Australia has become very popular as a destination for Singaporean tourists. Table 2 shows the increasing visitation number of Singaporean visitors to Australia between 1980 and 1991.

TABLE 2

Singaporean Arrivals by Purpose of Visit - 1980-1991

Year	H/Day	Visit Relative	Business	Con- vention	Other	Total
1980	6640	3600	3040	430	2710	16420
1981	8980	4000	3880	290	2470	19620
1982	11950	4420	4160	310	3560	24400
1983	17270	4910	4180	400	2990	29750
1984	18040	5050	4650	400	4870	33010
1985	20060	5400	5070	360	4440	35330
1986	28270	6530	5250	720	4200	44970
1987	37280	7760	5960	780	5180	56960
1988	40180	9220	7160	1330	5590	63480
1989	42200	9500	7100	800	5600	65200
1990	48200	10300	8300	800	8200	75900
1991	60100	11300	9300	1000	4500	87500

Source: Australian Bureau of statistics

Visitation from Singapore has increased tremendously and plays an important role in contributing to the total tourism earnings of Australia.

A detailed analysis of outbound Singaporean tourists arriving in Australia is illustrated below (Table 3).

TABLE 3

Visitor Arrivals to Australia - 1990-1992

1990	75,900		
1991	87,500		
1992	116,800		
PURPOSE OF VISIT	1990	1991	1992
Holidays	48,200	60,100	87,100
Visiting Relative	10,300	11,300	11,500
Business	8,300	9,300	10,000
Convention	800	1,000	900
Other	8,200	4,500	7,300
TOTAL	75,900	87,500	116,800

Source: Australian Bureau of Statistics

Based on the above statistics, there were 116,800 visitors to Australia from Singapore in 1992 which represents, an increase of 33.48% over the previous year.

As indicated in the above statistics, more Singaporeans are travelling to Australia for holidays. The holiday category in 1992 was 44.9% higher than in 1991.

The business and visiting relatives market are growing, but the actual percentage increases (that is, 4 per cent) are not as great as in the holiday segment. The increase in numbers of holiday visitors suggests that cheaper fares and other incentives are available.

Ooi (1992:42) stated that "Rising costs for travel to longstanding favourite destinations like Europe and North America have resulted in a switch by Singaporeans to cheaper, nearer and better value destinations such as Australia and New Zealand".

In addition, as reported in The New Paper in Singapore dated 13th October 1993:

"Australian Tourist Commission (ATC) figures show that, in the six months to June this year, the number of Singaporeans to visit Australia increased by 48 per cent over the last year.

The Singapore dollar, which averaged at S\$1.20 to one Australian dollar in that period, and the attractive fares offered by major airlines were incentives for Singaporeans to head Down Under."

In the Singapore Straits Times (1993:30) it was reported that the recession and the cheaper dollar have made Australia more attractive to the traveller including Singaporeans who form the fifth largest group of travellers to Australia.

The outbound market for Singaporeans occurs primarily during school holidays. A report from the Singapore Straits Times indicates that Singaporeans' most popular months of travel to Australia were June, November and December.

In addition, there were also growing links between Singapore and Australia that were not economically based which stimulated the increasing traffic. For example, students studying in Australia would likely encourage friends and parents to visit them. Ooi (1992:44) states that "Analysis of selected destinations indicates that most Singaporeans stay in hotel accommodation whilst abroad. Australia is an exception as more than a third of all visitors stay in the homes of friends and relatives. Less than 20% stay in hotels and approximately 30% stay in rented accommodation." Thus, such factors play an important role in generating Singaporean tourists to Australia.

Reilly (1989) stated that Singaporeans do not generally plan their holiday in advance. There is an increasing trend of Free Independent Travellers. Singaporeans are becoming more selective and more adventurous as they become accustomed to travel, especially destinations outside Asia. However, 50% of Singaporean tourists have visited Australia more than once, suggesting that when they are more familiar with their tourist destination, they are likely to become independent travellers.

Ooi (1992:44) states that:

"According to the Australian Tourist Commission's 1990 Annual Statistics, independent travel accounts for 64 per cent of Singaporean arrivals in Australia, with non-group inclusive tour packages at 14 per cent and group tour and inclusive travel at 22 per cent.

More than half of Singaporeans travelling to Australia were accompanied by one or two companions, of which travelling with family, friends and relatives constituted about 24 per cent. As with Malaysian holidaymakers, only about 5 per cent of Singaporean visitors have a stopover in New Zealand.

Perth is the most popular arrival point, followed by Sydney, Melbourne and Brisbane. Approximately 42 per cent of visitors from Singapore arrived in Perth, the closest major Australian city to Singapore. " (p.44)

Mr. Lee, Australian Federal Minister for Tourism, was reported in the Singapore Straits Times dated 15th September 1993, as saying that:

"Countries such as Singapore, Malaysia, Indonesia, Thailand, Taiwan, and Korea are making an increasingly important contribution to economic activity and employment in the Australian tourism industry as a result of their rapid economic development and the markets' increased appetite for overseas travel."

Ooi (1992) states that whilst some Singaporeans are on holiday, a smaller percentage cite business as their main motivation. The outbound Singaporean traveller make up a large proportion of the tourist, who are from the middle or upper income family, young or single professional. Therefore, Singapore is still a potential market for Australian tourism to develop its marketing strategies to target this particular groups. In fact, the Australian Tourist Commissions (1990) marketing strategy put Singapore as a priority in the marketing plan for 1989-1992.

Groves (1993) mentioned that a Singaporean travel agent on a fact finding tour was told Australians have been short sighted in concentrating on Japanese tourists, as there are many lucrative but untapped tourist markets. Wealthy Malaysian, Chinese and Americans have yet to discover Australia.

Singapore in the near future will be considered a potential market for the Australian Tourist industry. If the Australian Tourist Commission marketing strategy is mapped correctly.

Hoon (1990) stated that ATC's target for Asia is as follows:

ATC's TARGET FOR ASIA

COUNTRY	1990	2000
Singapore	72,000	200,000
Hong Kong	65,000	210,000
Malaysia	50,000	150,000
Indonesia	33,000	125,000
Taiwan	27,000	250,000
South Korea	14,000	250,000
Thailand	20,000	75,000
Asia (TOTAL)	375,000	1,615,000

Source: ATC : 1990

It can be seen from the above statistics that ATC is looking forward to rapid growth for the Asian market.

The Australia Tourist Commission target for the year 2000 is 200,000 visitors from Singapore. To achieve this goal, a marketing strategy must be developed that targets the sector of the Singaporean market most likely to visit Australia. This will increase the cost effectiveness of the campaign.

1.6 LIMITATIONS AND KEY ASSUMPTIONS USED IN THE STUDY

Based on this study, psychographic segmentation is subject to several limitations in exploring the tourism industry. The objective of using the psychographic statements is to illustrate the the psychographic nature of Singaporean tourists.

Lundberg (1980:278) states that "Psychographic research can take a variety of forms. It can be collected by indepth interviews, focus groups, word association tests, projective techniques and a number of similar techniques, most of which are subject to investigator bias or unreliability of the technique or instrument used. Feelings and attitudes are qualitative and labile. Nevertheless, the stuff of pleasure travel are emotions and attitudes and to predict or influence pleasure travel the researcher must get into the minds of the travellers".

Pearce (1980:123) states that the article by B. H. Farrell, "Tourism, Human Conflicts, cases from the Pacific, (Annals, 1979 : 2: 122 -126) argues that psychographic study of tourism is highly desirable. He suggests that the mind of the tourist, local people and developers are appropriate grounds for tourist researchers to explore. (1980 :122) "Unfortunately, Farrell's attempt to explore the minds of tourists has resulted in a meandering path through a veritable jungle of difficult subject areas, and has led him directly to a set of terminological fads and fashions.". Therefore,it is important to adapt the right approach in this study, if not, it might lead to a wrong analysis.

Thus, one has to be careful with the interpretation of the result, as Wells (1975) discussed in great depth concerning reliability, validity and application. This raises the question with respect to the present study as to how reliable and valid the measurements can be.

According to Well (1975:205) "Like other measurements, psychographic measurements can be reliable without being valid. They can be relatively free of random error but so full of irrelevancies and biases that conclusions based on them are partly (or even completely) false. The question of the validity of psychographics is difficult and complex and cannot be answered simply."

Plog (1987) regarded demographics, as a useful tool in travel research but believed it failed to explain the factors of motivation to travel. Psychographic measures, in contrast, answer all the important questions about how, why and what.

Pearce (1980:122)" suggests that the minds of tourists, local people and developers are appropriate grounds for tourist researchers to explore. This view is not a new one (c.f. Turner and Ash 1975:244), but judging from a recent catalogue of tourist psychology references (Pizam and Chandraseker 1979:78-79) it is still worth recording."

Thus, within limitations, psychographic segmentation is a useful tool for research into the tourism industry .

CHAPTER 2

LITERATURE REVIEW

2.1 Source

A literature search was conducted as to why people travel, as well as the concept of psychographic segmentation so that it could be applicable in line with the definition. In addition, a background of Singapore and characteristics of Singaporean travellers was an essential basis for the research. Other tourists variables and trends in relation to Singapore tourist market for Australia was source.

In accordance with the nature of the thesis, the main focus was confined to the understanding and preferences of Singapore Tourists' travelling abroad for vacation.

Psychographic variables and demographic data was used to investigate the response of Singaporean tourists.

In general, textbooks on tourism and marketing provide various definitions in relation to consumer behaviour. Tourism related research, Journal, such as Journal of Travel Research and Annals of Tourism research was source as it provide a good reference to the literature review.

A computerised search via APAIS, the Australian Leisure Index enabled identification of articles pertaining to the issues. In addition, other publications of related organisations, such as Australia Tourism Commission (ATC), Pacific Asia Travel Association (PATA) provided reference to the studies of the Singapore market for Australia. An additional literature search was based on journals like, Tourism Management, Travel & Tourism Analyst and tourism related articles in the Singapore Straits Times, magazines, and the local newspapers in Australia.

The literature search was conducted for the period 1960 to 1993. The earlier literature provided a useful definition, framework and concept of psychographic for this thesis. As for the later part of the literature, it provided a variety and indepth understanding of the subject

2.2 BACKGROUND OF SINGAPORE AND CHARACTERISTICS OF SINGAPOREAN TOURISTS

Khan, Chou & Wong (1990:410) stated that "Tourism is a fast-growing industry in Singapore." It creates jobs, earns foreign exchange and plays an important role in contributing to economic growth and development.

Singapore, has shown substantial growth since 1965 with the growth in the last ten years being dramatic. Doman (1993:22) stated that "Singapore's economic advancement is a success story not matched anywhere in the past 30 years. Year after year of double-digit growth rates have taken the tiny island city state to the verge of fully developed economic status." It has emerged as an industrial "Dragon" in Asia with tourism contributing greatly to this success.

With the development of the country and growing affluence of Singaporeans, there has been a great impact on life style. Rodan (1992:380) stated that " Singapore's rapid economic development has set in train important social changes. In particular, it has fostered the emergence of a substantial middle class with significant purchasing power that expresses itself in new lifestyle and aspirations."

Thus, with a total area of only 639.1 sq.km and a 2.7 million population living on an island, social activities to cater for the masses are limited. Therefore the Singapore Government and the Private Sector embarked on cultural and recreation programs for the locals and the tourist industry alike such as bringing international acts like Les Misrables and Michael Jacksons concerts to Singapore's numerous theatres.

In addition, other South East Asia countries like Malaysia, Indonesia and Thailand also provide tourist destinations for Singaporeans as alternative outlets for leisure and relaxation on short and long term basis.

The Bureau of Tourism Research reported in the Tourism and the Economy report in October (1991:12) that "Singapore, the largest source country for travellers to Australia in Asia (excl. Japan) is the most wealthy economy in Asia outside Japan."

Therefore, it is important to understand what motivates Singaporean tourists to travel abroad for vacation in other countries like Hawaii, Australia, Paris, USA and Asia.

CHARACTERISTICS OF THE SINGAPOREAN TRAVELLER

According to Singapore Tourist Promotion Board reported in the Good Weekend (1992:6) "The people of Singapore worked hard during the first 25 years of independence, transforming their tiny island republic from a third world nation into one of the most prosperous and advanced societies in Asia. After a quarter century of increasing growth, people are now starting to channel their energy and expertise into leisure and cultural pursuits."

Thus, it was important to gain an insight into the Singaporean traveller so that the countries they were visiting were able to communicate the benefits and experiences that the Singaporean tourists seek.

Raint (1990) wrote that the first time Singaporean travellers are affected by three K's - Kia su, Kia see and Kiam siap - which loosely translated from local dialects (Hokkien) mean not wanting to loose out, afraid of dying and stingy. Raint (1990:19) illustrated this by "At a buffet, he does not want to queue and rushes for his food, piling his plate high. Being in unfamiliar surroundings, he worries that he will be stranded if nobody meets him at the airport and thinks his luggage has been lost if he does not see it at baggage claim within minutes. And he never misses the chance to bargain and haggle over the price, no matter what he buys."

Thus, in understanding this context, one gains an insight into the Singaporean characteristics as a tourists on foreign soil. It provided an understanding to the host country they visited.

There are also other characteristics of the Singaporean traveller abroad. Kim (1993) stated that Singaporeans look for five 'C's in a hotel - Convenience, Comfort, Cleanliness, Cost-effectiveness and Chinese food when travelling abroad.

Singaporeans, when travelling overseas, typically would look out for Chinese restaurants or places selling Singaporean food for them to dine.

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Soh (1991) states that a true Singaporean will go out searching for their local food, irrespective of where they are in the world. They will not be content with apple strudel or wiener schnitzel. As a matter of fact, when they travel they look for food that is hygienic and suited to their own diet. Thus, it clearly indicates an important aspect of the characteristics of Singaporean travellers abroad.

Thomas (1987) stated that Singaporeans are known to be fussy when on vacation, especially about items such as meals, hotels, tours. They want the best and want it cheaply. They will shop around and bargain to get the best price in town.

Thomas (1989) stated that Singaporeans are notoriously safety conscious and perceive destinations like Australia and New Zealand as non-threatening. This could account for the increase of Singaporean tourists to Australia.

Table 4 contains a summary of characteristics of Singaporean travelling abroad, 1990 and 1991*

TABLE 4

Summary of Characteristics of Singaporean Travelling Abroad
1990 and 1991* (%)

Characteristics	Philippines	Thailand	Indonesia	Hawaii	Australia	Taiwan	Sri Lanka
MODE OF ARRIVAL							
Air	98.9	....	26.4	....	....	99.5	....
Sea	1.1	....	73.6	....	....	0.5	....
Land	....	....	....	....	....	....	....
SEX							
Male	90.0	68.6	79.6	66.2	....	78.7	71.3
Female	10.0	31.4	20.4	33.9	....	21.3	28.7
TYPE OF ACCOMMODATION							
Hotel	73.7	99.2	64.6	90.3	17.0	....	....
Residence of Friends/Relatives	10.0	0.2	2.6	6.9	35.0	....	....
Others	16.3	0.6	32.0	2.8	48.0	....	....
Not Stated	....	....	0.8	....	....	....	....
FREQUENCY OF VISIT							
First Visit	34.2	37.0	18.5	70.7	50.0	....	....
Revisit	65.8	63.0	70.4	29.3	50	....	....
Not Stated	....	....	2.1	....	....	....	....
TRAVEL ARRANGEMENTS							
Package/ Group Tour	2.6	40.8	19.2	40.0	22.0	....	....
Non-Package/ Group Tour	97.4	59.2	78.5	60.0	78.0	....	....
Not Stated	....	....	2.3	....	....	....	....
LENGTH OF STAY							
Days	6.8	....	3.4	6.3	....	....	....
Nights	....	....	....	....	25.0	....	....

Source: National Tourist Organisation

* Data for Australia, Taiwan and Sri Lanka are for 1990; all others are for 1991.

Based on Table 4, Australia has an equal percentage of first time and return visitors from Singapore.

In addition, a high percentage of travel arrangements are not in packages or group tours and the length of stay amounts to 25 nights which is quite high. However, not all data is available for comment and comparison.

In conclusion, an understanding of the characteristics of Singapore travellers is an important basis in the study of the tourism industry. It establishes the backbone of the marketing strategy to target specific segments of potential tourists. An advertising or promotional activity can be developed to woo tourists to Australia if the marketer understands and identifies the characteristics of Singaporean tourists and the market segments.

2.3 MOTIVATION FOR TRAVEL

Murray (1964:9) stated that " At any given time a person is motivated by a variety of internal and external factors. The strength of each motives and the pattern of motives influence the way we see the world, the things we think about, and the actions in which we engage".

Harssel (1988:147) state that " A motive can best defined as "the need or desire of an individual to do a particular thing."

In Peters (1960:39) Newcomb is quoted as saying:" An Organism is motivated when - and only when - it is characterized both by a state of drive and by a direction of behaviour towards some goal which is selected in preference to all other possible goals. Motive, then, is a concept which joins together drive and goal."

Thus, there are many reasons for people to travel. Improvements to transportation made it possible for people to travel all around the world for various reasons. For instance, visiting friends and relatives, business travellers, attending special events, vacation and so on.

Dickman (1989) states that, the motivation for travel to other countries is the desire to see a particular thing such as the Sydney Opera House or seeing how people live and work or attending special events or seeing natural wonder, or animal life and art.

Gee, Choy & Makens (1984:40) stated that " A significant amount of travel is motivated by factors that do not relate to destination attributes per se, but rather are dependent on specific objectives involving business, education, health, religion, politics, and personal and/or family emergencies. The motivations for these types of travel usually can be more readily pinpointed than motivations for pleasure travel".

However, McIntosh and Goeldner (1986:124) state that "An important part of the consideration of tourism psychology and motivation is the fact that a person usually travels for more than one reason. For example, if a person goes to an area for health reasons, the fact that a series of symphony concerts is being held at the same place during the time of the visit acts as an attraction and a reinforcement to the decision to go".

Mill and Morrison (1985) mentioned the approach to understanding tourist motivation is insufficient by developing a list of reasons why people travel. First, the tourists may be unaware of the true reasons behind their travel behaviour and may not wish to divulge the real reason or motivation behind a trip. A second reason is that such lists are insufficient to explain consumer motivations.

Mill and Morrison (1985:3) therefore stated that, "The development of such lists is a necessary first step towards establishing a classification system that will enable us an understanding and ultimately predict the tourist's decision making process".

Mill (1990:42) also stated that "By understanding what makes people travel we can do a better job of advertising to them to induce them to travel. Additionally, we can do a better job of catering to their needs if we know what those needs are."

Thus, the approach of understanding why people travel is very important so that we can identify and classify market segments by developing a marketing strategy. Basically, people travel for pleasure and experience to learn about other countries' natural beauty and cultures.

"Why do people travel to get to something or away from something, when we can identify the experience they seek, we'll have come a long way in motivating the traveller." Cornell H.R.A Quarterly (1971:3)

2.4 PSYCHOGRAPHIC SEGMENTATION

DEFINITION OF PSYCHOGRAPHIC

In the Dictionary of Marketing Research, Van Minden (1987:136) defined psychographics as "A description of groups that goes beyond personal data and includes, for example, psychological characteristics (such as personality traits). The basic premise is that a group may be described more adequately in terms of interests, level of aspiration or aggression than by place of residence or size of community".

However, there are many schools of thought with regards to the definition of psychographics, especially with respect to marketing aspects. Some view it as lifestyle, others view it as activity or attitude. Therefore, the definition is diversified and thus, there is a need to analyse a few definitions to provide a clear understanding of the concept.

Gee et al (1984) stated that Psychographics is referred to as the lifestyle characteristics of consumers. A person's buying behaviour is affected by his or her lifestyle. Although people come from the same subculture, social class or even occupational group, they may have different lifestyles.

Mill and Morrison (1985:64) stated that "Psychographics has developed as a way of describing consumer behaviour in terms of a distinctive way of living in order to determine whether or not people with distinctive lifestyle have distinctive travel behaviours. Psychographics is the development of psychological profiles of consumers and psychologically based measures of types of distinctive modes of living or lifestyles"

Well (1975) stated, that although there is a need for a common definition of psychographics, unfortunately there is no single definition that meets with general approval. The Wells study of twenty-four articles on psychographics contained more than thirty-two definitions.

However, in this approach, psychographic definition is based on Wells (1975) which defines it as a term applied to various research concepts that go beyond demographic research in segmenting the total market. It all depends on the objectives of the researchers as to what extent the dimension added to demographics is to be included in the activities, interest, opinions, needs, values, attitudes and personality traits.

Wells' definition is very significant and appropriate for this research . Wells (1975:197) stated that "Operationally, the psychographic research can be defined as quantitative research intended to place consumers on psychological as distinguished from demographic dimensions. Because it goes beyond the standard and the accepted, it offers the possibility of new insights and unusual conclusions. Because it is quantitative rather than discursive, it opens the way to large, representative samples of respondents and to multivariate statistical analysis of findings."

2.5 APPLICATION OF PSYCHOGRAPHIC SEGMENTATION

The psychographics concept and application in the field of marketing has been widely accepted. As Pearce (1978:15) stated "Plog suggests that a traveller is distributed normally along a continuum from psychocentrism to allocentrism".

Plog (1991:64) stated "self-inhibited, non-adventurous person as psychocentric, based on "psyche" referring to the self, and "centric" meaning the centring of much one's thought or concerns on the small problems in daily life."

Thus, this group of people is not keen to explore new places. In their travel behaviour they prefer to visit familiar places whereas the opposite applies to allocentrics. In identifying these two types of personalities the reason why tourists visit certain destinations is illustrated. As a result, a marketing strategy can be developed within the tourism industry so that it can increase tourism in Australia.

However, psychographic measurement of personality is administered through a questionnaire instrument. Plog (1987:204) stated that "The only way to find out why they choose different vacation lifestyles is to get inside their heads to determine what makes them tick." Plog (1987:206) "The typical approach is to :

- * Employ factor analysis to determine the primary factors (psychographics types);
- * Clarify the cutting points between these factors by means of cluster analysis and/ or discriminant function analysis;
- * Utilise regression statistics to determine which consumer behaviour can be predicted by each psychographic personality characteristics and to what degree."

In 1973, Plog divided travellers into allocentric and psychocentric classifications and worked on the psychographic segmentation of tourists. He suggested that tourists will seek different travel experiences based on their selection of travel and places of interest. This approach is useful in marketing research as it offers an understanding of consumers basic motivation for travel and relates these to places of interest.

2.6 USES OF PSYCHOGRAPHIC SEGMENTATION

Psychographic segmentation is very useful if it is correctly administered in the research. It is especially useful for the marketer in developing their marketing strategy to determine or identify which is the potential segment in the market to influence or capture. It enables the marketer to plan their promotional activities to target that specific segment in the market. ✓

Churchill (1987) stated that lifestyle or psychographic analysis can help plan effective strategies to reach the target market if the customers are known in terms of how they live, what interests them and what they like. The idea is to identify a segment of the population who are likely to behave similarly toward the product and who share the same lifestyle.

Lungberg (1980) stated that psychographic research can be used in various ways. It can be collected based on indepth interviews, focus groups, word association tests, projective techniques and other kinds of psychological testing methods, most of which are subject to investigation bias or the inherent unreliability of the technique or instrument used.

Therefore, the feeling and attitudes are qualitative. As a result, pleasure travel is associated with emotions and attitudes and the market researcher must try to understand the mind set of travellers so as to predict or influence pleasure travel. Well (1975) in his study on psychographic profiles revealed that many studies had drawn from a large set of general lifestyle items.

In his critical discussion on psychographics, Well classified four major categories; reliability, validity, applications to real world marketing problems and contributions to the study of consumer behaviour.

He stated such methods offer ways of describing consumers that have advantages. However, the question of reliability and validity require more study as to this approach. Nevertheless, it offers new ways of looking at old problems, new dimensions for charting trends and a new vocabulary in which consumer typologies may be illustrated.

Weber (1989) stated that psychological research provided the marketing manager with detailed profiles to assist in the visualisation of the market being sought. It seeks to determine the consumers' aspects as to why they travel when others don't. In addition to determining how they think, what are their attitudes and values, what type of place is of interest or desire to visit whilst on holiday.

Hawes (1977:7) selected the ten most used travel related statements from a recent nationwide survey for analysis. In his findings he implied that "the use of innocuous, easy to administer, fun to answer AIO (Activities, Interests, and Opinions) statements may be able to substitute for more direct, prying questions dealing with family expenditures for travel and recreation."

Holloway (1988:100) stated that psychographic variables can be segmented. "Research by the Irish Tourist Board has found that holidays in Ireland tend to meet the needs in Maslow's terms. This knowledge can be used by those promoting holidays to Ireland, by their emphasising Ireland as a destination for self-reflection and tranquillity."

Yuan and McDonald (1990) using the concept of "push" and "pull" factors examined the motivations of overseas travelling. They examined four countries: Japan, France, West Germany and the United Kingdom. The results showed a selection of tourist destinations to differ among the countries. It indicated the level of importance of the individuals travelling from each country to satisfy the same unmet needs (push factors) and attractions for choosing a selected destination (pull factors).

Harrell (1988:150) stated "The push factors for a vacation emanate exclusively from within the traveller. They are often a reaction to the living or working environment and are related to the social and psychological conditions unique to a particular individual. The pull factors for a vacation are aroused by the destination itself. Push motives help explain why people develop the desire to go on vacation; pull motives help explain the choice of destination".

According to Dann (1977) examination of tourist motivations based on the concepts of "Push" and "Pull" factors has been generally accepted.

Abbey (1979) stated that the lifestyles approach has been used as a means to explain the reasons behind consumer behaviour. In his studies, Abbey suggests that lifestyle variables provide tour designers with some additional information far superior to demographic profiles in communicating tourist preferences to designers of tour packages.

Mieczkowski (1990:168) stated that "Psychographic research uses combinations of multitudes of variables in order to provide detailed profiles of submarkets for the marketers who are trying to reach their clients in a most efficient way. Thus, the researchers identify combinations or clusters of measurable interacting and integrated variables (not just a sum of them) to arrive at psychographic submarkets. These lifestyle groupings are being correlated with certain leisure time patterns which also constitute clusters of preferred activities."

Hudman and Hawkins (1989) used psychographics to identify market objectives in order to develop research that would identify the most likely people to use a particular service or product.

Markowitz (1980:147) "summarised the importance of studying psychographics of the tourists: Research travel motivations and attitudes.....why people travel, what is important to them, what they get out of the travel experience, can create the context in which specific products or communication strategies of a hotel, an airline or simply providing what consumers feel and how his attitudes are changing is crucial to an understanding of the market place."

Gladwell (1990) in his finding users of an Indiana State Park Inn found evidence to suggest that vacation lifestyle measures used can be identified. As a result, three groups were identified as the Knowledgeable Traveller, Budget Conscious traveller and Traveller Planner.

Mayo (1975) used multidimensional scaling and psychographics to find out why some tourists are attracted to National Parks. It was found that some psychographic characteristics were used to determine tourist attractions of National Parks. These tourists were illustrated as being adventurous, action oriented individuals and impulsive. They were interested in outdoor activities and like to escape from people and crowds. They regard themselves as opinion leaders who do not plan their vacation in any great detail. He has identified and classified the following seven segments: The Adventurer, The planner, The Impulsive Decision Maker, The Action Oriented Person, The Outdoor Man, The Escapist and the Self Designated Opinion Leader, helping to describe the tourist who is mostly attracted to National Parks.

Sinclair and Stabler (1991) stated that psychological and sociological analyses indicated a valuable contribution to consumer motivation, choice and holiday behaviour. It also attempts to establish how tourism images are formed and how these images influence consumer choice, together with the constraints to which consumers are subject. This knowledge provides helpful information to travel marketers for formulating marketing programs.

Schul and Crompton (1983) in their exploratory study used a limited number of travel specific psychographic statements and sociodemographic variables to predict and explain behaviour for a sample of international vacationers. They found that behaviour was a better tool to explain travel specifics than demographics. It was found that the travel specific lifestyle approach was related to the length of time over which external search behaviour occurred.

Using factor analysis in their approach, they were able to identify six psychographic travel factors: "Cultural Interest", "Comfort", "Familiarity/Convenience", "Activity", "Opinion Leadership" and "Knowledge Seeker". Based on their study, it was seen that psychographics was a useful tool in market research.

Cohen (1972) identified a continuum of tourists broken into four categories; "The Organised Mass Tourist", "The Individual Mass Tourist", "The Explorer" and "The Drifter". His classification indicated that a tourist's psychographics are strongly influenced by his or her societal and cultural background.

Many schools of thought have also attempted to use psychographics in their research to identify new market segments for their marketing strategy. Lundberg (1980:279) stated that "A 1976 study funded by the Boeing Commercial Airline Company used the interview technique and a "focus" group technique to identify four psychographic groups who travel little and it was felt they could be introduced to travel."

✓ This study is similar to the studies presented in the literature review. The validity of the approach has been proven and adapted in the early studies by Schul and Crompton (1983). Therefore the concept of psychographic segmentation of the Singaporean traveller can be adapted from various other studies.

Leiper (1990:10) stated that "Psychological research into motivations has demonstrated that tourists are not homogeneous, but have different and overlapping needs and motivation. Studies by Crompton (1979), Phillip Pearce (1982), Stear (1984), Krippendorf (1987) and others, and a summary by Douglas Pearce (1987) support that claim."

Weber (1989) stated that Psychographics allow an indepth grasp of the psychological side of tourists. Therefore psychographic segmentation was an analytical tool in the research for describing and understanding tourists.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 THE DEFINITION OF TOURISTS

A definition of Tourists must be established at the commencement of the research.

According to Leiper (1990):

"A tourist can be defined, in behavioural terms, as a person travelling away from their normal residential region for a temporary period, staying away at least one night but not permanently, to the extent that the behaviour involves a search for leisure experiences from interaction with features or environmental characteristics of the place(s) they choose to visit". (p.10)

3.2 THE SAMPLE

✓

The data was gathered in Singapore during February 1993 whilst the author was on Summer vacation. The major basis for selecting the respondents were:

- Aged 16 and over;
- Having travelled abroad for vacation;

It was the intention of the author to interview only people who have visited Australia, but the thrust of the study changed after the questionnaire had been administered and the need for some of the questions changed.

For the purpose of this study, due to the limitations of the time frame, a sample of 120 people was chosen as it was identified in line with the definition of a tourist who had travelled abroad during the previous twelve months. Moreover, due to the financial and availability of human resources at the time of the survey implementation in Singapore, the sample size was then restricted to 120 respondents. In addition, it was the intention of the author to gather a larger sample of 400 people, unfortunately people were reluctant to answer the questionnaire on the spot. Therefore, it may not be a full representation of the population, but this finding will form an initial stage of the research in analysing Singaporean tourists.

A sample of 120 individuals were identified who have travelled abroad. The sample was identified by interviews at a busy shopping street known as Orchard Road. In addition, interviews were also conducted in various Organisations with the help of the author's friends to identify whether anyone had travelled abroad or visited Australia for vacation.

Of the 120 questionnaires delivered to respondents, only 101 were fully completed. The sample of 101 was chosen, as it was identified in line with the definition of a tourists who have visit other countries.

3.3 THE QUESTIONNAIRE

The questionnaire was developed after studying similar questionnaires developed in this area. Information was sought from previous research relating to psychographic segmentation which was used as a guide in this study.

There were two parts to the survey, the first, of which involved demographic data which provided a descriptive profile of the respondent. The first section consisted of travel characteristics such as length of stay. In addition, socio-economic and demographic data such as Age, Education, Marital Status, Information source and Annual Total Income. A nominal scale was used to allocate a value to the description.

The second part of the survey was an abstract of sixteen psychographic statements borrowed from Schul and Crompton (1983) who extracted them from Hat Associates (1978). It illustrated their feelings about their travel preference in terms of interests, activities and attitudes towards travel.

The 16 psychographic statements were found to be suitable for this research because it provided an insight of a potential tourist. As illustrated earlier, Schul and Crompton (1983) examined the sixteen psychographic statements to gain an understanding of the tourists profile and provided an insight to the target market. Therefore, this study shared the same scenario where a Likert Scale was applied with five categories ranging from "1 = Strongly Agree" to 5 = Strongly Disagree".

Therefore, it was the intention of the author to use the abstract to identify various segments of the Singaporean tourists.

An extract of sixteen psychographic statements was inserted in the questionnaire to gather information regarding the respondents specific lifestyle. It also addressed a variety of topics concerning their interests, activities and opinions with respect to their vacation experience.

In each case, respondents were asked to use a likert scale to indicate their preference ranging from "strongly agree" to "strongly disagree". This enabled the author to perform statistical analysis on the data.

3.4 PILOT STUDY

A pilot study was conducted among a group of eight respondents. Feedback was also sought from the respondents. A result of the pilot study will analyse. It indicated that the questionnaire was clear and understandable, however the main area of concern was the question of annual total income which was considered a sensitive issue by the respondents. As a result it might not be well received by the respondents.

3.5 PROCEDURE

The distribution of the questionnaire was done with the help of the authors friends in Singapore.

However, prior to the interview, each of the three research assistants was carefully instructed on how to conduct the survey and the importance of identifying people who had travelled abroad.

The questionnaire was distributed by identifying the people who had travelled abroad recently. If a respondent stated "No" to the question regarding overseas travel then he/she was not interviewed. If the respondents stated "Yes" to this screening question then the questionnaire was administered.

The research was conducted at a number of Corporate and Government Offices. In addition, it was also conducted in the busy shopping street known as Orchard Road. However, not many were willing to respond because many could not bothered to fill in the questionnaire.

No doubt, there are a substantial number of people who had travelled abroad but most were reluctant to answer the questionnaire on the spot. Therefore only 101 completed questionnaires were collected.

3.6 VARIABLE IDENTIFICATION

Independent variables.

The independent variables were described as travel characteristics, in term of as Marital Status, Age, Education, Information Source and Annual Total Income per year.

Dependent variables.

The dependent variables were only five significant variables chosen based on the five highest loading out of sixteen psychographic statements using Factor Analysis. The variables were then tested for the correlation and hypothesis. In addition frequency tables and graphs, the Mean and Standard Deviation will be presented.

Hair et al (1990) defines Factor Analysis as one of the statistical techniques whose primary objective is data reduction and summarization with a minimum loss of information in the process of condensing the information. It was also used to analyse inter-relationships among a large number of variables and explain these variables in terms of the factors.

The five significant variables were identified and segmented and a name was given to the typology based on their travel psychographic characteristics.

Pearson Correlation analysis was applied to test the correlation. Sekaran Uma (1992:265) stated "A Pearson correlation matrix will provide this information - that is, will indicate the direction, strength, and significance of the bivariate relationships among the variables in the study". These results are presented in the next chapter.

However, based on the variables and the analysis of the mean and one tailed test of standard deviation that the results fall beyond the range of "Strong Agreed " = 1 and "Agreed" = 2. An arbitrary decision was made to re-code the data in SAS and to perform hypothesis testing. In addition, to determine this extreme value can be categorised into "Strong Agreed" and "Agreed" range in the Likert Scale.

Thus, a frequency table of five Typologies was created (see Appendix F). A Chi-Square Test of independence was performed. According to Turner (1988:113) "The chi-square test will determine whether there is any significant difference between the observed sample frequencies of a categorised variable and those frequencies which could be expected according to the null hypothesis."

However, based on the results, one would assume that the sample cell was found to be small to perform a good test (see Appendix G). It was indicated in most of the cells the "warning" signal and stated "Chi-square test may not be a valid test".

Hence, to overcome this limitation, Turner (1988) applied the Kolmogorov-Smirnov technique.

Turner (1988:123) stated that "The Kolmogorov-Smirnov technique is used to determine whether or not the two samples have been drawn from either the same population, or populations with the same distribution". Thus, using Chi-square Table, Kolmogorov-Smirnov sample Test was used for testing.

The Kolmogorov-Smirnov Two Sample Test

Turner (1988:123)

"The Kolmogorov-Smirnov test is sensitive to any difference in the distributions from which the two samples were drawn. If the two samples come from the same population, or populations with the same distribution, both samples should generate cumulative distributions which do not vary significantly. Therefore, if the cumulative distributions of the two samples are far apart at any point, this suggests the samples come from different populations."

Calculation of the two sample tests.

First, the variables were arranged for each data set into frequency tables with a cumulative frequency using the same intervals. The second step was to find out the differences between the two cumulative distributions for each interval. The third step is to determine the largest of these differences and call the value 'D'.

The final step was to determine the statistical significance of 'D' where N1 and N2 are large and one tail test was performed using Chi-square table of critical value of two degrees of freedom where X^2 is calculated by using the formula below:

Formula:

$$X^2 = \frac{4D^2 (N1 * N2)}{(N1 + N2)}$$

Based on the calculation the value was obtained. The obtained value X^2 was compared with critical value to obtain the status.

The Critical value X^2 shows that at 95% significance, the critical value of 5.99 was applied.

Thus, if (X^2 - obtained valued) exceeds critical X^2 , the null hypothesis was rejected.

CHAPTER 4

DATA FINDING AND ANALYSIS

4.1 DESCRIPTION OF DATA

With the aid of SAS, a statistical software system, the data was analysed. SAS is a software system capable of performing many statistical analyses from simple descriptive statistics to complex and operational research statistics.

A frequency table (see Appendix B) was created and summaries of demographic data are listed in Table 5 and Figures 1 to 5.

TABLE 5
Summary of Demographic Sample

CATEGORY	FREQUENCY	PERCENTAGE %	CUMULATIVE %
SEX			
Male	41	40.6	40.6
Female	60	59.4	100
AGE			
Under 21	8	7.9	7.9
22 - 30	35	34.7	42.6
31 - 40	45	44.6	87.1
40 & Over	13	12.9	100
MARITAL STATUS			
Single	31	30.7	30.7
Married	57	56.4	87.1
Married/Children	13	12.9	100
HIGHEST LEVEL OF EDUCATION			
Secondary	46	45.5	46.5
Tertiary	41	40.6	87.1
Vocational/Technical	2	2.0	89.1
Other	11	10.9	100
ANNUAL TOTAL INCOME			
Below 15,000 (S\$)	16	15.8	17.8
15,000 - 24,999	24	23.8	41.6
25,000 - 35,000	23	22.8	64.4
Over	36	35.6	100

FIGURE 1:

GENDER

Although a gender balance in the survey was intended, the actual result indicated a slight bias towards the female population as indicated 59.4% as oppose to 40.6% male.

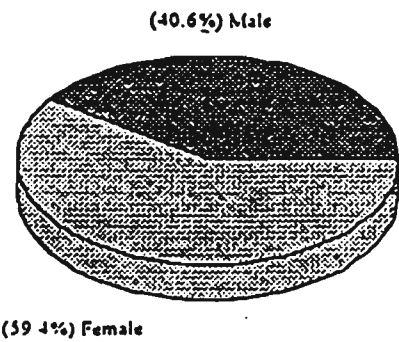


FIGURE 2:

AGE

As shown in the plot below, over 79% of survey respondents were aged between 22-40 years old. however, nearly 45% of the respondents were aged between 31 to 40 years old. It was also stated by the Australian Tourist commission (1983), that potential Singaporean travellers were aged 30 years and over as found in the Holiday Market Report, January 1983.

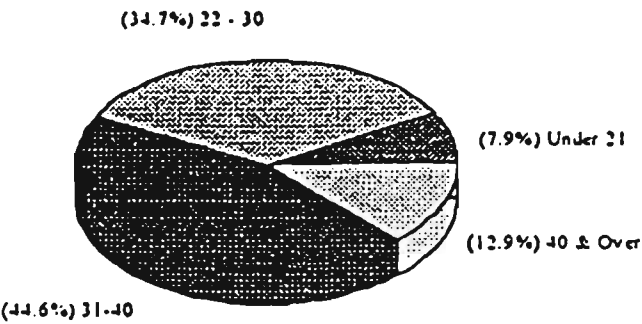


FIGURE 3:

EDUCATION

As illustrated in the diagram, education was considered an important factor in the travelling segments. It indicated 46.0% of the sample had completed their Secondary education, whilst 41.0% had attained a Tertiary qualification.

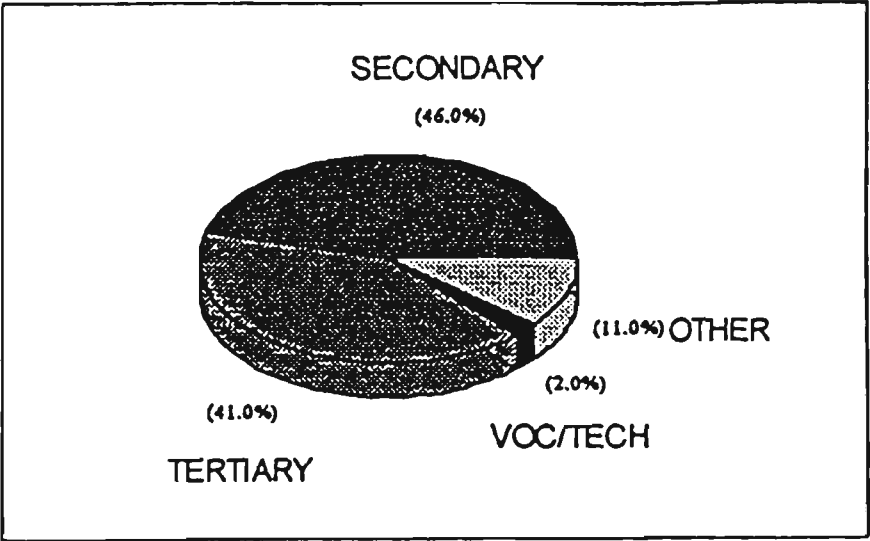


FIGURE 4:

MARITAL STATUS

As illustrated in the chart below, the total sample consisted of 30.7% of the people being single and 56.4% being married.

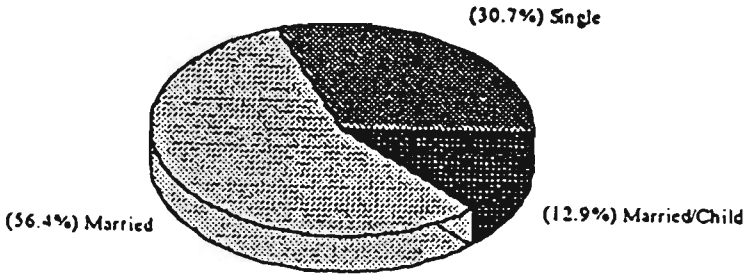


FIGURE 5:

ANNUAL TOTAL INCOME LEVEL

Annual total income level is another factor that needs to be considered in assessing the propensity to travel. It was found that 36.4% of the sample earned an income over S\$36,000. Thus, it assumed that they belong to upper income level.

Another 23.2% earned between S\$25,000 and S\$35,000 per annum and this segment may be referred to as middle income, whilst 24.2% earned between S\$15,000 to S\$25,000 per annum.

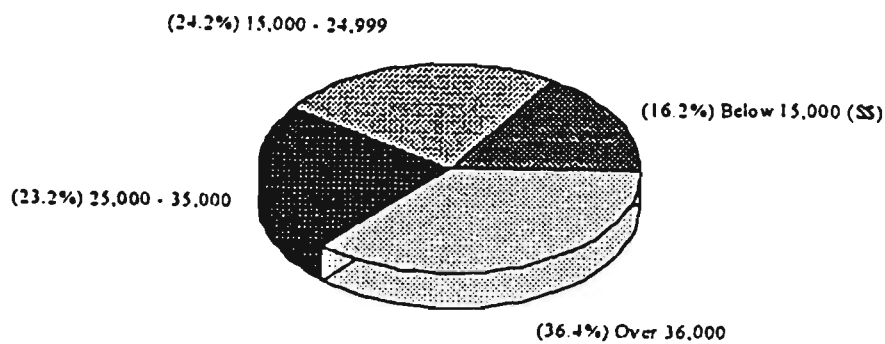


TABLE 6

Means and Standard Deviations of Psychographic Statements
(16 items) N-101

No.	Psychographic Statements	Means	S.D.
1.	When I travel abroad, I prefer to be on a guided tour.	3.17	1.13
2.	The nicest vacation is one where I can just relax and do nothing.	2.60	1.13
3.	When I go on vacation, I look for adventure and an opportunity to escape from the ordinary.	2.03	0.96
4.	The best vacations are those that have a lot of night life.	3.26	1.12
5.	It is important that I stay at the best places when on vacation.	2.79	1.05
6.	I prefer to visit countries that have old monuments and other historical buildings.	2.69	0.98
7.	I always like to mix with the local people and experience the local customs.	2.16	0.81
8.	I mostly like to visit places that my friends have visited before.	3.31	0.94
9.	One of the best parts of travelling is to visit new cultures and a new way of life.	1.95	0.82
10.	When I go on a trip, I prefer to arrange my own sightseeing schedule and accommodation.	2.51	1.05
11.	Most of my friends come to me for advice on what foreign countries to visit.	2.98	0.94
12.	I like to visit places where I've been able to learn things that help me in education and/or business.	2.42	0.92
13.	I try to do many things when I'm on vacation.	3.13	1.18
14.	I prefer to visit places where I can understand the language.	2.52	1.01
15.	It is important that there are plenty of things to entertain my children.	3.07	1.05
16.	I prefer to visit places with a large variety of activities and sights.	2.03	1.00

organized
pleasure
seeker
active
tourist
sophisticated
seeker
pleasure
seeker
sophisticated
seeker
explorer
pleasure
seeker
explorer
organized
organized
explorer
active to
active to
organized
tourist
sophisticated

4.2 FACTOR ANALYSIS

DATA ANALYSIS OF PSYCHOGRAPHIC STATEMENTS

The psychographic statements were analysed and the Means as well as Standard Deviations were calculated and are listed in Table.6 .

McClave and Benson (1981:39) defined " The mean of a set of quantitative data is equal to the sum of the measurements divided by the number of measurements contained in the data set. "

The Mean of the sixteen individual psychographic statements was calculated and presented in Table 6. It was found that five Questions (3, 7, 9, 12 & 16) out of the sixteen psychographic statements showed a favourable response. Because the Means were indicated less than 2.5 and close to 1 (which was defined 1 = strongly agree and 2 = ¹⁺²₂ agree). On the other hand, there were eleven responses (Questions 1,2,4,5,6,8,10,11,13,14,15) shown unfavourable as the Means illustrated more than 2.5 to 5 (3 = indifferent and 4 = disagree and 5 = strongly disagree).

In plotting this result, normal distribution curve was drawn. It was also assumed that the response to the sixteen psychographic statements were normally distributed.

Lapin (1991:68) defined " The Normal Distribution applied to continuous random variables, such as times, weights and diameters measured on a continuous scale. It is usually described in terms of a bell shaped curves. "

Shim et al (1986:220) defined that "The standard deviation measures the extent to which data spread out or disperse." In analysing the standard deviation of the 16 psychographic statements it was found that the response to the questionnaire had a wide dispersion with a range of 0.92 to 1.13. However, a factor analysis was performed to determine the finding.

4.3 CHI-SQUARE TEST ANALYSIS

A Chi-square test was performed. (see Appendix G).

The resultsof the Chi-square test on the five typologies are illustrated in Table 11.

The result of this test was to determine whether or not the variables are related. Sekaran (1992) stated that in general a significant of $p < .05$ was accepted conditional level in social science research. Thus, in examining the data, it was found that Factor 5, "Sophisticated" was significant with a score of 0.030 (see Appendix E). The rest of the variables were considered insignificant as the variables failed to qualify the significance level of $p < .05$.

TABLE 7
Factor 1 - Explorer

CATEGORY	HEAVY	LIGHT	CHI-SQUARE PROB.
Sex	82	19	0.712
Age	82	19	0.190
Maritial Status	82	19	0.380
Education	82	19	0.365
Annual Total Income	82	19	0.439
Source of Information	82	19	0.529

Factor 2 - Organised Tourists

CATEGORY	HEAVY	LIGHT	CHI-SQUARE PROB.
Sex	30	71	0.211
Age	30	71	0.562
Marital Status	30	71	0.297
Education	30	71	0.187
Annual Total Income	30	71	0.626
Source of Information	30	71	0.681

Factor 3 - Active Tourist

CATEGORY	HEAVY	LIGHT	CHI-SQUARE PROB.
Sex	29	72	0.214
Age	29	72	0.450
Marital Status	29	72	0.116
Education	29	72	0.742
Annual Total Income	29	72	0.236
Source of Information	29	72	0.894

Factor 4 - Pleasure Seeker

CATEGORY	HEAVY	LIGHT	CHI-SQUARE PROB.
Sex	20	81	0.143
Age	20	81	0.556
Marital Status	20	81	0.688
Education	20	81	0.891
Annual Total Income	20	81	0.124
Source of Information	20	81	0.252

Factor 5 - Sophisticated Seeker

CATEGORY	HEAVY	LIGHT	CHI-SQUARE PROB.
Sex	26	75	0.039
Age	26	75	0.810
Marital Status	26	75	0.842
Education	26	75	0.736
Annual Total Income	26	75	0.390
Source of Information	26	75	0.105

However, the SAS indicated a warning signal indicating Chi-square may not be a valid test. It is essential to present the result as it is appropriate in explaining the use of Kolmogorov Smirnov technique for data analysis. Thus, to overcome this problem Kolmogorov Smirnov technique was applied according to Turner (1988). The calculations are attached in Appendix H.

4.4 DATA ANALYSIS OF THE HYPOTHESIS TESTING

Based on the market segmentation studies of the tourism industry, the following assumptions have to made in this study;

- * Due to the different demographic and psychographic characteristics of tourists, their needs and demands will vary accordingly.
- * Tourists come from a heterogenous population.
- * A market segmentation can be developed and identified based on similar characteristics.

With these abovestated assumptions, five factors were formulated to test the hypthoses so as to determine the correlation between the social demographic data in terms of high and low loading on psychographic profile. As a result, a market segmentation perspective can be developed to target this type of market segment which illustrated the potential traveller. In addition, it was also attempted to identify any special characteristics evolved in this factor (typologies). Simultaneously, to examine are there any differences among each factor which the tourists are segmented. Thus, the Kolmogorov Smirnov goodness-of-fit test was employed.

Sheskin (1984:47) stated that "The Kolmogorov Smirnov goodness-of-fit test evaluates an observed culmulative frequency distribution in relation to a hypothesized theoretical cumulative frequency distribution".

Turner (1988) stated that generally as a convention, 95% significance or the level of confidence level is acceptable, which is shown on a normal distribution as a z score of + 1.96.

Thus, critical value of 5.99 was used as a yard stick for measurement because it represented 95% confidence level.

FACTOR 1 - EXPLORER

Hypothesis 1

Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Explorer.

H : That there is a difference.
I

Based on Kolmogorov Smirnov, it was found that there was no significant relationship (see Table below).

CATEGORY	X ² CRITICAL VALUE	X ² VALUE OBTAINED	STATUS
Sex	5.99	> 0.13	Accept Null Hypothesis
Age	5.99	> 1.69	Accept Null Hypothesis
Marital Status	5.99	> 0.87	Accept Null Hypothesis
Education	5.99	> 1.32	Accept Null Hypothesis
Annual Total Income	5.99	> 1.84	Accept Null Hypothesis
Information Source	5.99	> 0.96	Accept Null Hypothesis

Thus, we conclude there is no relationship because the critical value, 5.99 is more than the obtained value. Therefore, null hypothesis was accepted.

When obtained < critical
null hypothesis is accepted

FACTOR 2 - ORGANISED TOURISTS

Hypothesis

Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Organised Tourists.

H : That there is a difference.
I

Based on Kolmogorov Smirnov, it was found that there was no significant relationship (see Table below).

CATEGORY	X ² CRITICAL VALUE	X ² VALUE OBTAINED	STATUS
Sex	5.99	1.51	Accept Null Hypothesis
Age	5.99	0.86	Accept Null Hypothesis
Marital Status	5.99	1.95	Accept Null Hypothesis
Education	5.99	1.37	Accept Null Hypothesis
Annual Total Income	5.99	1.43	Accept Null Hypothesis
Information Source	5.99	0.27	Accept Null Hypothesis

Thus, we conclude there is no relationship because the critical value, 5.99 is more than the obtained value. Therefore, null hypothesis was accepted.

FACTOR 3 -ACTIVE TOURISTS

Hypothesis

Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Active Tourists.

H : That there is a difference.
I

Based on Kolmogorov Smirnov, it was found that there was no significant relationship (see Table below).

CATEGORY	X ² CRITICAL VALUE	X ² VALUE OBTAINED	STATUS
Sex	5.99	1.48	Accept Null Hypothesis
Age	5.99	2.58	Accept Null Hypothesis
Marital Status	5.99	3.25	Accept Null Hypothesis
Education	5.99	0.12	Accept Null Hypothesis
Annual Total Income	5.99	2.82	Accept Null Hypothesis
Information Source	5.99	0.61	Accept Null Hypothesis

Thus, we conclude there is no relationship because the critical value, 5.99 is more than the obtained value. Therefore, null hypothesis was accepted.

FACTOR 4 - PLEASURE SEEKER

Hypothesis

Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Pleasure Seeker.

H : That there is a difference.
I

Based on Kolmogorov Smirnov, it was found that there was no significant relationship (see Table below).

CATEGORY	X ² CRITICAL VALUE	X ² VALUE OBTAINED	STATUS
Sex	5.99	2.06	Accept Null Hypothesis
Age	5.99	0.61	Accept Null Hypothesis
Marital Status	5.99	0.32	Accept Null Hypothesis
Education	5.99	0.09	Accept Null Hypothesis
Annual Total Income	5.99	2.61	Accept Null Hypothesis
Information Source	5.99	1.56	Accept Null Hypothesis

Thus, we conclude there is no relationship because the critical value, 5.99 is more than the obtained value. Therefore, null hypothesis was accepted.

FACTOR 5 - SOPHISTICATE SEEKER

Hypothesis

- Ho: There is no difference between the socio-demographic based on "Sex", "Age", "Marital Status", "Education", "Annual Total Income" and "Information Source" profile in terms of high and low loading on psychographic profile of the Sophisticated Seeker.
- H : That there is a difference.
- I

Based on Kolmogorov Smirnov, it was found that there was no significant relationship (see Table below).

CATEGORY	X ² CRITICAL VALUE	X ² VALUE OBTAINED	STATUS
Sex	5.99	4.09	Accept Null Hypothesis
Age	5.99	0.37	Accept Null Hypothesis
Marital Status	5.99	0.25	Accept Null Hypothesis
Education	5.99	0.79	Accept Null Hypothesis
Annual Total Income	5.99	0.46	Accept Null Hypothesis
Information Source	5.99	2.91	Accept Null Hypothesis

Thus, we conclude there is no relationship because the critical value, 5.99 is more than the obtained value. Therefore, null hypothesis was accepted.

CONCLUSION OF THE FINDING

In conclusion, it states that Demographic data in terms of Sex, Age, Marital Status, Education and Information Source as illustrate in the finding were found to be insignificant with regard to hypothesis testing. These variables were not found to be an effective way of delineating the market segment.

On the other hand, using Psychographic statements provided a good tool in studying the profile of the Singaporean tourists where five typologies was mapped out. These were as follows:

- Factor 1: "Explorer"
- Factor 2: " Organised Tourist"
- Factor 3: "Active Tourist"
- Factor 4: "Pleasure Seeker" and
- Factor 5: "Sophisticated Seeker".

As a result, it provided the market planner to identify the difference in the market segment. A marketing strategy can be developed and targeted to the right market segment of Singaporean tourists going abroad for vacation.

Based on the hypothesis testing, it can conclude that there was no relationship between psychographic and demographic data.

CHAPTER 5

DISCUSSION

FACTOR ANALYSIS :PSYCHOGRAPHIC SEGMENTATION

After examining the means and standard deviations of the sample, factor analysis was performed. One needs to define the concept of factor analysis so as to provide a clear understanding of the finding.

Hair, Anderson and Tatham (1990:235) define "Factor analysis is a generic name given to class of multivariate statistical methods whose primary purpose is data reduction and summarisation."

Kass and Tinsley (1979) regard factor analysis as a mathematical technique to allow the reduction of a large number of interrelated variables to a smaller number of factors. The main objective was to attain scientific parsimony or an economy of description.

Lewis (1984:67) stated "Its primary purpose is to gather this large set of variables into more or less homogeneous composites of all the important variables in the larger set, so that each composite variable becomes the surrogate for a number of other variables. The operating principle is that a number of variables really mean the same thing to a respondent along one underlying dimension."

In applying this approach, the data analysis, is considered one of the statistical techniques where the primary objective is data reduction and summarisation with a minimum loss of information in the process of condensing the information. It is also used to analyse the inter-relationships among a large number of variables and explain these variables in terms of the factors.

Eigenvalue is described as the amount of variance accounted for in a factor. It is calculated as the sum of squares for a factor. It can also be used to determine the number of factors to extract. For example a latent root criterion considers factors with an eigenvalue greater than one to be significant.

According to Lewis (1984:67) "Loading - A measure of the effectiveness of factor analysis is factor loadings, which are standardized correlations between the composite factors and the original variables that are represented by the composites. A high factor loading value indicates a high correlation between the original variable and the composite that now represents it."

With the above definition and explanation an analysis of the resulted was illustrated in Table 8. In applying this approach, the initial principal component analysis resulted in five factors with eigenvalues greater than one which were regarded as significant according to Hair et al (1990). The eigenvalues percentage of the variance and factor pattern was illustrated in Appendix C. The factors were identified which used to describe the variables of Singaporean tourists.

In further analysis, applying varimax rotation, a factor loading was calculated through a repetitive SAS program process. The factors were examined so that they were orthogonal (which means the factors are extracts in such a way that the factor axes were maintained at 90 degreea) meaning that each factor was independent of all other factors.

As a result of the varimax rotation, the computer SAS searches for factors. Loading upon completion a factor structure matrix is used to interpret the factor displayed. This results in a varimax rotation of the initial matrix being provided. (See Appendix D). It was found that five factors were extracted accounting for 64.5% of the variance in the total data. ✓

With the rotated factor pattern, an interpretation of the factors is reflected in the travel specific psychographic statements where loading 0.40 or above is considered. Hair et al (1990) stated that factor loading are considered more important ± 0.40 and if it is ± 0.50 ✓ or greater it is considered very significant. The higher the factor loading, the more important the loading is in interpretating the factor matrix. It was found that Schul andä Crompton (1983) also used loading of 0.40 or above in interpreting the meaning of the ✓ factors. On this aspect, a loading of 0.40 was to be considered in the analysis. In Appendix C and D a brief description of each segment and factor loading of the variable is shown.

Thus, based on a principal components factor analysis with varimax rotation applied, five segments were mapped out. This was based on the sixteen psychographic statements of the characteristics of travel specific lifestyle. The five factors were described as "Explorer", "Organised Tourists", "Active Tourists", "Pleasure Seeker" and "Sophisticated seeker". (see illustration on Table 8).

Based on this Typologies, the characteristics of Singapore tourists were segmented. The attitude and preferences for travelling abroad was indicated in this typology for providing an insight into this study.

TABLE 8
A Brief Description of the Psychographic Segments

	FACTOR LOADING
FACTOR 1 - EXPLORER	
New Culture 9	.86593
Learn New Things 12	.58846
Experience Local Customs 7	.55122
FACTOR 2 - ORGANISED TOURISTS	
Preference for Guided Tour ✓	.85966
Entertainment for Children	.59795
Advice to Friends ✓	- .54623
Planning own Schedule	- .67336
FACTOR 3 - ACTIVE TOURISTS	
Do Many Things ✓	.80081
Understand Language ✓	.66135
Adventurous & Escape the Ordinary ✓	.44557
FACTOR 4 - PLEASURE SEEKER	
Friends Visited Before 2	.79528
Relaxation ✓	.68674
Best Places	.51960
FACTOR 5 - SOPHISTICATED SEEKER	
Night Life ~ 4	.68335
Variety of Activities ✓	.46521
Historical Monument	- .63792

9
12
16
11

FACTOR 1 - EXPLORER

As illustrated on Table 8, factor analysis has identified variables 9, 7 and 12 as factors which were mapped out being identified as "Explorer" with salient loading of 86.59% on Variable 9 which was "One of the best part of travelling is to visit new cultures and a new way of life."

"Explorer" means that tourists like to experience new culture, learn new things and experience local customs in the host countries.

Thus, it was suggested that Factor 1 people (Singaporean tourists) like to explore new things and experience local customs. For example, The Australian Aboriginal way of life. It serves as a motivation factor for Singapore tourists to travel to Australia.

Leone 1993 (ed.) states that new research studies conducted by the Australian Tourist's Commission (ATC) on the attitudes and perceptions of potential middle and long haul holiday travellers in Japan, Hong Kong, Indonesia, Korea, Malaysia, Taiwan, Thailand and Singapore as well as other countries show that Asians, once visited Australia for fun in the sun and its glamorous images of cities and are now changing their pattern of interest. They now visit Australia for its different cultures and its open environment. This factor captures the increasing interest of Singaporeans interested in exploring new culture in Australia.

According to McIntosh and Goeldner (1986:183-193), Cohen Literature "Toward A Sociology of International Tourism" in 1972 have classified these segments of the typology as "The Explorer". "This type of tourist arranges his trip alone; he tries to get off the beaten track as much as possible, but he nevertheless looks for comfortable accommodation and to speak their language. The explorer dares to leave his "environmental bubble" much more than the previous two types, but he is still careful to be able to step back into it when the going becomes too rough. Though novelty dominates, the tourist does not immerse himself completely in his host society, but retains some of the basic routines and comforts of his native way of life."

Thus, The Explorer by Cohen and Explorer here share similar typologies. Basically, the tourists looking for adventure and escape from their normal daily life.

FACTOR 2 - ORGANISED TOURISTS

The second factor, identified as "Organised Tourists" also scored a high loading of .85966 in Variable 1, which was "When I travel abroad, I prefer to be on a guided tour. It was identified that the traveller in this segment preferred to use a guided tour and was concerned about entertainment for their children. One would assume that they were not confident in travelling alone. Thomas (1987:26) stated "Comparatively few Singaporeans actually travel alone. The vast majority move as a family group or with a party of colleagues from work. Thus, the package is the ideal way for them to travel."

It also indicated that travellers in this pool were not adventurous but safety conscious while travelling abroad. Thomas (1989) stated that Singaporeans were notoriously safety conscious and perceive destinations like Australia and New Zealand as non-threatening. They did not like to plan their schedule or give advice to friends in regard to place of destinations. These findings were indicated by a negative value in the loading.

One would assume they expected tour operators to plan and organise for them and they also did not like to give advice to friends on what foreign countries to visit because different people have different expectations and perceptions of destinations. Thus, they did not want to be blamed if the vacation turned out far from their expectations. As the saying goes "Beauty lies in the eye of the beholder" .

McIntosh and Goeldner (1986:185) stated that Cohen (1972) in his study regard this group of tourists as "The Organised Mass Tourist" in his typology. He described "The organised mass tourists is the least adventurous tourists and remains largely confined to his "environmental bubble" throughout his trip. The guide tour, conducted in an air-conditioned bus, travelling at high speed through a steaming countryside, represents the prototype of the organised mass tourist. This tourist type buys a package tour as if it were just another commodity in the modern mass market. The itinerary of his trip is fixed in advance, and all his stops are well-prepared and guided; he makes almost no decisions for himself and stays almost exclusively in the microenvironment of his country. Familiarity is at a maximum, novelty at a minimum."

Thus, these factors share similar characteristics with the Cohen (1972) typology.

This typology suggests that there was a pool of Singaporeans who still prefer to go on a guided tour when they go on vacation. Thus, one would assume that they were very "safety conscious" when travelling abroad and not confident enough to travel alone. As a result, this indicates to the Tourism Industry that any publicity regarding a dangerous destination will deter this group of Singaporean tourists from visiting Australia because they were very sensitive to the environment in choosing a destination.

In addition, Tour Operators can design tour packages, that are compatible with these attitudes and preferences for vacation.

FACTOR 3 - ACTIVE TOURISTS

Variable 3, 13 and 14 were identified as Active Tourist. These variables seem to suggest that the tourist, when on vacation preferred to visit places where they could understand the host language and looked for adventure and escape from the ordinary.

The traveller in Factor 3 preferred to do as many things as possible during their vacation. They preferred to visit places with a large variety of activities and subjects and as a result, they felt satisfied in what they had achieved during their vacation. This can be explained due to the social behavioural trait known as "Kiasusim" in local context.

Bremer (1988:44) stated that "Kiasuism may be defined as an attitude by which a person undergoes, on the one hand, extreme disquiet if he discovers that has not got full value for his expenditure of money, time and effort, and on the other, a distinct sense of exhilaration if he discovers that he has got much more than the full value for that expenditure. The ultimate distress is when he has got nothing for something, and the ultimate joy when he has got something for nothing."

There are various manifestations of Kiasuism. An example can be illustrated why they try to do many things when they are on vacation. For instance Bremer (1988:49) states that "The Singaporean on tour provides an extremely interesting case study. Having paid a large sum of money for the tour, the Singaporean makes sure that he gets his every cent's worth, right from the moment he boards the plane to the moment he sets foot back on Singapore soil.

He carries his pocket calculator with him to satisfy himself that the food, accommodation, facilities, entertainment, free gifts, etc., which form the tour package are exactly accounted for." Thus, this can be seen as an explanation why they try to do many things when they go on vacation.

According to Tan (1990), Peter Choo, Managing Director of Scenic Traveller observation, on Singaporean tourists cited that Singaporean found it was boring if they went on vacation having nothing to do even if it was only three days.

However, the Factor 3 people, suggested that they were active but not very adventurous and seek to escape from the ordinary life. Its reflected familiarity was still the key elements in seeking many activities.

Thus, an understanding of this profile of Singaporean tourists enables the marketer to design travel products to cater for this segment of "Kiasu" tourists. As a result, the design of the travel products must include more social activities like sight seeing, shopping, cultural activities and package tours. In this way it can cater for this segment of "Kiasu" tourists who prefer to do many things whilst on vacation.

FACTOR 4 - PLEASURE SEEKERS

Variable 2, 5 and 8 were identified as "Pleasure Seeker". The Factor 4 traveller preferred to visit places based on information from friends on where they have visited. One would assume that this group is travelling for vacation as a status symbol.

According to Tan (1990), a most recent survey conducted by Frank Small Research found that in general Singaporeans perceived holiday travel as a status symbol. This group of travellers were keen to share their experiences and show photographs taken on their vacations with their friends.

In addition, they preferred to relax and stay at the best place during vacation. Thomas (1989) stated that Singaporean tourists were notoriously safety conscious travellers, even when they were not travelling with family. This indicates why they tend to visit places that friends have already visited. Moreover, they showed a preference for relaxation and preferred to stay in the best accommodation when on vacation. This could be due to the stressful lifestyle.

Ooi (1992) commented that Singaporeans seeking a respite from the pressures of city life would continue to take short vacations. This would explain why, when on vacation they preferred to relax and stay at the best accommodation, enjoying their vacation to the fullest. One would assume, they tried to pursue a sophisticated lifestyle.

This typology of the Singaporean tourist can be regarded as seeking pleasure in travelling by following the foot steps of their friends. They would not venture into a journey to a new destinations if none of their associates or friends had visited beforehand. One can assume that these people know what to expect when travelling to a destination based on their friends information.

Thus, it is important that Singaporean tourists to Australia have a wonderful experience in Australia so that they promote it when they return home. As the saying goes " It only takes one rotten apple to ruin the barrel".

FACTOR 5 - SOPHISTICATED SEEKER

Variables 4, 6 and 16 were identified as "Sophisticated Seeker".

It was identified that the travellers in this segment showed preference for night life as the best vacation. They preferred to visit places with a variety of activities. However, they did not like to visit countries that have old monuments and other historical building. As shown by the factor loadings being negative for these elements.

However, night life was regarded as an important aspect for Factor 5 tourists who preferred night life activities including casino, dancing, eating, visiting musical/opera, concert and movies. These clearly suggest that the tourist was strongly attracted to a variety of activities whilst on vacation.

Oliver and Chan (1989) stated that based on their research study on Hong Kong as a travel destination in South-East Asia: A Mutidimensional Approach revealed that entertainments and attractions were regarded as the most important factors leading to tourists satisfaction for Singapore tourists.

Thus, the "Sophisticate Seeker" illustrated that there was a pool of Singaporean tourists seeking preference for such activites when on vacation.

This typology suggested that Singaporean tourists were very sophisticated in regard to social activities in their life-style when they go on vacation. This Sophisticated Seeker shows a preference for night activities in term of night shopping, casino gambling, concerts and other night life. Thus, each seeks their own activities. As the saying goes " To each its own" and "One mans meat is another mans poison".

Illustrated below are the five selected psychographic statements which score a high loading.

TABLE 9
Five Selected High Loading Variables

No.	Factor Label	Question-naire	Variable	Factor Loading
1.	Explorer	9.	One of the best parts of travelling is to visit new culture and a new way of living.	0.8659
2.	Organised tourists	1.	When I travel abroad, I prefer to be on a guided tour.	0.85966
3.	Active Tourists	13.	I try to do many things when I am on vacation.	0.80081
4.	Pleasure Seeker	8.	I mostly like to visit places that my friends have visited before.	0.79528
5.	Sophisticated Seeker	4.	The best vacations are those that have a lot of night life.	0.68335

Pearson Correlation analysis was applied.(see Appendix E). In analysing the five important psychographic statements (variables) which scored the highest loading, it was found that the correlation of Question 1 and 8 was 0.32734 and the confidence level was 99.92%. This means that there is a significant relationship between these two variables. However, the relationships amongst the rest of the variables were not significant because the significance level was more than 0.05.

Therefore statement 1 : "When I travel abroad, I prefer to be on a guided tour" shares similar characteristics with statement 8, " I mostly like to visit places that my friends have visited before me." Both indicated travellers who are not adventurous and are very safety conscious wishing to ensure that the destination is safe.

Turner and Ash (1975:284) stated that "Holidays will be seen as status symbols rather than as chances to improve one's understanding of new cultures. They will still feel unsure of themselves and will thus play safe, sticking to established tourist centres, rather than spreading out into more adventuresome area."

On the other hand, the three high loading variable: 9, 8 and 4 were:

Variable 9: One of the best parts of travelling is to visit new culture and a new way of living.

Variable 8: I try to do many things when I'm on vacation.

Variable 4: The best vacations are those that have alot of night life.

and have shown no correlationship at all. Each factor established an independent finding of its own. They show different preferences, from one to another in motivation for travel.

Based on the variables and the analysis of the mean and one tailed test of standard deviation that the results fall beyond the range of "strongly agree" = 1 and "agree" = 2. However, an arbitrary decision was made to recode the data in SAS and to perform hypothesis testing. A frequency table (see Table 10) of five typologies was created. In addition, to determine this extreme value can be categorised into "strongly agree" and "agree" range in the Likert Scale.

Thus, where it was defined "strongly agree" = 1 and "agree" = 2 was classified under "heavy" in the terminology. Neither "disagree and agree" = 3, "disagree" = 4, "strongly disagree" = 5 was classified as "light". A description of "heavy" and "light" terminology was used, where a frequency table was generated.

Hypothesis testing was applied to see any difference in the demographic profiles of these visitors. Thus, the Chi-Square test was applied with regard to the 5 factors that fitted into the demographic profile. The result is reported below:

TABLE 10
Frequency Table of Five Factor (Typology)

FACTOR (VARIABLE)	HEAVY %	LIGHT %
Explorer	81.2	18.8
Organised Tourist	29.7	70.3
Active Tourist	28.7	71.3
Pleasure Seeker	19.8	80.2
Sophisticated Seeker	25.7	74.3

Based on the frequency table, 81.2% of the population showed a favourable respond in term of Explorer. On the other hand, the majority of the population indicated "Light" in term of Organised Tourist, Active Tourist, Pleasure Seeker and Sophisticate Seeker as illustrated in the above table.

In conclusion, as presented in our results, it indicated that the demographic data, showed weak or no relationships. Thus, it indicated that more activities need to be created to cater for this pool of tourists. Therefore, one would conclude that the relationship between the five factors were not significant as predictorsä of Singaporean tourists travelling abroad for vacation. However, in terms of demographic data it is useful and important in examining the market segment in terms of education, income and gender which also effects tourism. These factors illustrate the importance of tourism research. The use of psychographic segmentation provides a more meaningful and significant result.

Therefore, as presented in the discussion, marketing strategies for development of the travel services or product will enhance the Australian market as a tourist destination for these segments of Singaporean tourists to Australia. In addition, it is important to understand the profile of Singaporean tourists and how they choose their holiday destination. It is essential that marketers in the tourism industry develop strategies that position their product in the most favourable perspective. Woodside and Pitts (1976:15) stated that "Lifestyle research may offer particular useful findings for developing travel products, for example package tours and theme parks."

The Australian Tourist Commission (ATC) has already focused on three key segment groups - Cultural Discovery, City Glamor and Fun in the sun - to overcome an image problem, because Australia was perceived as expensive, bland or boring even racist. In this way the ATC hopes to capture a bigger segment of tourists from Asia.

The latest advertising campaign in Asia is known as "Australia: the Feeling is Magic". Its focus is on different holiday experiences and the ATC hopes that the aggressive marketing approach will pay off ensuring a steady growth in tourism.

LIMITATIONS OF THE STUDY

In this study, psychographic segmentation were explored in the Singapore tourists market with subject to several limitations, however, the main objective is to identify potential traveller to Australia.

Firstly, due to the research being conducted for this thesis, the sampling timeframe was a major limitation. Due to the lack of financial and human resources at the time of survey implementation, the sample size was then restricted to 120 respondents.

Singaporeans participating in this study was required to complete the survey on the spot (shopping mall) were reluctant to do so. As a result, a number of Singaporeans were reluctant to participate. Consequently, the data collected may not be a truly representative of the entire population.

CHAPTER 6

CONCLUSION

In conclusion, this study forms an initial stage in the research and the author believes there is much scope for more work. However, based on the finding it will illustrate the significance of the research and make recommendation to the finding.

The analysis of the result, it has identified five market segments of Singaporean tourists. It provides an insight of Singaporean tourists in determining their preference when going on vacation. It also illustrates the travellers characteristics of the objectives for going on vacation and what expectations they desire.

Thus, it suggests some implication that in the travel industry there is a pool of potential tourists from Singapore that term under the five segments. These market segments are as follows: "Explorer", "Organised Tourist", "Active Tourist", "Pleasure Seeker" and "Sophisticated Seeker". With these five identified segments, Australia has the resource and attractions to offer to these segments of tourists from Singapore.

Therefore, the key to success in the marketing strategy is to gain an insight of what Singaporean tourists perceive for a tourist destination when they go on vacation. The host country in turn can develop the marketing plan to communicate the tourist product to the potential Singaporean tourist by promoting to the right segment, because different products are targeted at different audiences. This can be achieved by creating awareness programmes, advertising, trade shows, brochuring and stress the importance of creating an image to the right segment. As a result the key component is to generate the interest that motivates Singaporean tourists to Australia.

In using psychographic segmentation study, it is important to understand the potential tourist from Singapore going on vacation. Based on hypothesis testing, psychographic statements and demographic data shows no significant co-relationship, but demographic is still a vital tool in the research work. Demographic data is still considered a major criteria in determining potential tourists in the tourism industry because it provided the characteristics of the tourists which can be used for market segmentation.

Thus, with the growing interest of Singaporean tourists visiting Australia the growth for this market will continue to increase in the future. Therefore, it is imperative to use psychographic study to shape the marketing strategy because tourists psychographics will change as time goes by.

In conclusion, this research has shed some light in using psychographic statements to identified the relevant market segment. This research is only in its initial stage to illustrate an awareness of the potential tourist from Singapore.

RECOMMENDATIONS

With the identification of the five market segments, travel products and services can be developed by the marketer that are appropriate to the key segments of the Singaporean market.

Thus the recommendation for the five identified segments are as follows:

"Explorer" This segment of Singaporean tourists like to experience new culture. Therefore, Australian Tourism can promote the unique Australian Aboriginal Culture to this segment of the population. Marketers can also expand the market by developing aboriginal tourist products for merchandising.

As for "Organised Tourists" marketers can provide Tour Packages to include Airfare or just Tour Package only to this segment of tourists. However, marketing strategies must emphasise safety of the destination because this segment is very sensitive to unsafe destinations. Thus, personal selling is important for this segment as reassuring is the key issue.

"Active Tourists" - This segment of tourists can be marketed by promoting "Australia a places of many Interest" including Outback and Australian wild life "Pleasure Seeker" -The marketing strategy for this segment of tourists was to promote Australia as a Garden City, Beach Resort and Shopping Paradise.

"Sophisticate Seeker" - A marketing strategy can be developed by creating more night activities and tourist spots to meet the demand of the tourists. Activities include Casino Gambling and Late Night Shopping.

Thus, the five psychographic factors have provided useful insights. Although psychographic study is a relatively new field, it provides information not readily available elsewhere.

A product strategy must be developed for Singaporean tourists which indicates to each market segment what travel potential is offered in Australia. Advertising appeal, using slogans such as "Australia is Magic" must be an on-going process to keep market segments informed. As a result, it will create awareness in the tourist industry.

Thus, besides marketing strategies, customer service plays an important factor in wooing this segment of tourists to Australia.

Customer services play an important part in promoting tourism and good service will receive good feedback and create a good reputation in the tourism industry. Therefore, understanding the customers needs and delivering the products will enhance the flow of future tourists to the country.

Thus, with the increasing growth in overseas travel, Australia can be one of the potential markets for Singaporean tourists. The ATC Annual Report (1992:15) stated that the "Tracking studies carried out in Singapore on the first two to go on air revealed that Australia has moved from fourth to first place as the most popular holiday destination for Singaporeans, both in terms of awareness and intent." As a result, it hopes to maintain Australia's profile at the forefront in projecting itself to the Singapore market.

All in all, this study only form an initial stage of the finding. It provides an insight into the profile of Singapore tourists. Thus, with the identifications of the five segments, it will enable Australia Tourism Industry Marketing Department in refocusing its marketing strategies. In addition, it helps to develop and design the travel products that attract these potential markets by using promotional advertising to reach them.

QUESTIONNAIRE

Please circle your answer to the following questions or where appropriate.

1.

Sex

(a)

Male

(b)

Female
2.

In which age group do you belong?

(a)

Under 21

(b)

22 - 30

(c)

31 - 40

(d)

40 Years & Over
3.

What is your marital status?

(a)

Single

(b)

Married

(c)

Married/Children
4.

What is the highest level of education you have completed?

(a)

Secondary

(b)

Tertiary

(c)

Vocation/Technical

(d)

Other
5.

In which range of annual total income do you belong to?

(a)

Below \$15,000

(b)

\$15,000 to \$25,000

(c)

\$25,000 to \$35,000

(d)

Over \$36,000
6.

Have you visited Australia before?

(a)

Yes

(b)

No

7. Where did you obtain your information in respect to visiting Australia?
- (a) Friends/Relatives
 - (b) Television
 - (c) Magazine
 - (d) Travel Agent
 - (e) Other
8. How long did you stay in Australia?
- (a) 1 week or less
 - (b) Over 1 week
 - (c) 1 month or more
9. In Australia, where have you visited?
- (a) Sydney
 - (b) Melbourne
 - (c) Gold Coast
 - (d) Alice Springs
 - (e) Adelaide
 - (f) Perth
10. How much did you allocate for your expenditure on your trip?
- (a) Less than \$1,000
 - (b) \$1,001 to \$3,000
 - (c) \$3,001 to \$5,000
 - (d) Over \$5,000

B. Below you will find a list of statements about your activities, interest and opinions regarding various aspects of the vacation experience and type of preferred destinations. Please circle for each item depending on your feelings. Each number represents your feelings as follows.

- 1. Strongly Agree
- 2. Agree
- 3. Neither Disagree nor Agree
- 4. Disagree
- 5. Strongly Disagree

1. When I travel abroad, I prefer to be on a guided tour.

1. 1 2. 2.5 3. 4.5 5. 6.7

2. The nicest vacation is one where I can relax and do nothing.

1. 2. 3. 4. 5.

3. When I go on vacation, I look for adventure and an opportunity to escape from the ordinary.

1. 2. 3. 4. 5.

4. The best vacations are those that have a lot of night life.

1. 2. 3. 4. 5.

5. It is important that I stay at the best places when on vacation.

1. 2. 3. 4. 5.

6. I prefer to visit countries that have old monuments and other historical buildings.

1. 2. 3. 4. 5.

7. I always like to mix with the local people and experience the local customs.

1. 2. 3. 4. 5.

8. I most like to visit places that my friends have visited before me.

1. 2. 3. 4. 5.

- | | | | | | | |
|-----|--|----|----|----|----|----|
| 9. | One of the best parts of travelling is to visit new cultures and new ways of living. | 1. | 2. | 3. | 4. | 5. |
| 10. | When I go on a trip, I prefer to arrange my own sightseeing schedule and accommodation. | 1. | 2. | 3. | 4. | 5. |
| 11. | Most of my friends come to me for advice on what foreign countries to visit. | 1. | 2. | 3. | 4. | 5. |
| 12. | I like to visit places where I've been able to learn things that help me in education and/or business. | 1. | 2. | 3. | 4. | 5. |
| 13. | I try to do too many things when I'm on vacation. | 1. | 2. | 3. | 4. | 5. |
| 14. | I prefer to visit places where I can understand the language. | 1. | 2. | 3. | 4. | 5. |
| 15. | It is important that there is plenty to entertain the children at the places I go on vacation. | 1. | 2. | 3. | 4. | 5. |
| 16. | I prefer to visit places with a large variety of activities and sights. | 1. | 2. | 3. | 4. | 5. |

APPENDIX B:

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	41	40.6	41	40.6
FEMALE	60	59.4	101	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	8	7.9	8	7.9
22-30	35	34.7	43	42.6
31-40	45	44.6	88	87.1
40 YEARS AND OVE	13	12.9	101	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	31	30.7	31	30.7
MARRIED	57	56.4	88	87.1
MARRIED/CHILDREN	13	12.9	101	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1	1.0	1	1.0
SECONDARY	46	45.5	47	46.5
TERTIARY	41	40.6	88	87.1
VOCATIONAL/TECHN	2	2.0	90	89.1
OTHER	11	10.9	101	100.0

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2	2.0	2	2.0
BELOW \$15000	16	15.8	18	17.8
\$15000 TO \$25000	24	23.8	42	41.6
\$25000 TO \$35000	23	22.8	65	64.4
OVER \$36000	36	35.6	101	100.0

PREVIOUS VISIT

A_06	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE (N	2	2.0	2	2.0
YES	99	98.0	101	100.0

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE	1	1.0	1	1.0
FRIENDS/ RELATIV	47	46.5	48	47.5
TELEVISION	3	3.0	51	50.5
MAGAZINES	16	15.8	67	66.3
TRAVEL AGENT	23	22.8	90	89.1
OTHER	11	10.9	101	100.0

LENGTH OF STAY

A_08	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE	1	1.0	1	1.0
1 WEEK OR LESS	39	38.6	40	39.6
OVER ONE WEEK	51	50.5	91	90.1
1 MONTH OR MORE	10	9.9	101	100.0

VISIT SYDNEY

A_09_A	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE (N	59	58.4	59	58.4
YES	42	41.6	101	100.0

VISIT MELBOURNE

A_09_B	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE (N	68	67.3	68	67.3
YES	33	32.7	101	100.0

VISIT GOLD COAST

A_09_C	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE (N	50	49.5	50	49.5
YES	51	50.5	101	100.0

VISIT ALICE SPRINGS

A_09_D	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE (N	101	100.0	101	100.0

VISIT ADELAIDE

A_09_E	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE (N	93	92.1	93	92.1
YES	8	7.9	101	100.0

PERTH

A_09_F	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE (N	63	62.4	63	62.4
YES	38	37.6	101	100.0

EXPENDITURE

A_10	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE	1	1.0	1	1.0
LESS THAN \$1000	16	15.8	17	16.8
\$1,001 TO \$3000	59	58.4	76	75.2
\$3001 TO \$5000	14	13.9	90	89.1
OVER \$5000	11	10.9	101	100.0

GUIDED TOUR

B_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	5	5.0	5	5.0
AGREE	25	24.8	30	29.7
NEITHER DISAGREE	34	33.7	64	63.4
DISAGREE	21	20.8	85	84.2
STRONGLY DISAGRE	16	15.8	101	100.0

RELAX

B_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	20	19.8	20	19.8
AGREE	29	28.7	49	48.5
NEITHER DISAGREE	26	25.7	75	74.3
DISAGREE	23	22.8	98	97.0
STRONGLY DISAGRE	3	3.0	101	100.0

ADVENTURE AND ESCAPE

B_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE	1	1.0	1	1.0
STRONGLY AGREE	29	28.7	30	29.7
AGREE	47	46.5	77	76.2
NEITHER DISAGREE	17	16.8	94	93.1
DISAGREE	4	4.0	98	97.0
STRONGLY DISAGRE	3	3.0	101	100.0

NIGHT LIFE

B_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	7	6.9	7	6.9
AGREE	19	18.8	26	25.7
NEITHER DISAGREE	29	28.7	55	54.5
DISAGREE	33	32.7	88	87.1
STRONGLY DISAGRE	13	12.9	101	100.0

BEST PLACES

B_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	12	11.9	12	11.9
AGREE	29	28.7	41	40.6
NEITHER DISAGREE	31	30.7	72	71.3
DISAGREE	26	25.7	98	97.0
STRONGLY DISAGRE	3	3.0	101	100.0

HISTORY

B_06	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	10	9.9	10	9.9
AGREE	36	35.6	46	45.5
NEITHER DISAGREE	33	32.7	79	78.2
DISAGREE	19	18.8	98	97.0
STRONGLY DISAGRE	3	3.0	101	100.0

LOCAL CUSTOMS

B_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	19	18.8	19	18.8
AGREE	53	52.5	72	71.3
NEITHER DISAGREE	24	23.8	96	95.0
DISAGREE	4	4.0	100	99.0
STRONGLY DISAGRE	1	1.0	101	100.0

FRIENDS VISITED

B_08	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	1	1.0	1	1.0
AGREE	19	18.8	20	19.8
NEITHER DISAGREE	40	39.6	60	59.4
DISAGREE	30	29.7	90	89.1
STRONGLY DISAGRE	11	10.9	101	100.0

NEW CULTURE

B_09	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	29	28.7	29	28.7
AGREE	53	52.5	82	81.2
NEITHER DISAGREE	16	15.8	98	97.0
DISAGREE	1	1.0	99	98.0
STRONGLY DISAGRE	2	2.0	101	100.0

OWN SCHEDULE

B_10	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	20	19.8	20	19.8
AGREE	29	28.7	49	48.5
NEITHER DISAGREE	34	33.7	83	82.2
DISAGREE	16	15.8	99	98.0
STRONGLY DISAGRE	2	2.0	101	100.0

ADVICE TO FRIENDS

B_11	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	6	5.9	6	5.9
AGREE	21	20.8	27	26.7
NEITHER DISAGREE	49	48.5	76	75.2
DISAGREE	19	18.8	95	94.1
STRONGLY DISAGRE	6	5.9	101	100.0

LEARN THINGS

B_12	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	16	15.8	16	15.8
AGREE	41	40.6	57	56.4
NEITHER DISAGREE	30	29.7	87	86.1
DISAGREE	14	13.9	101	100.0

TOO MANY THINGS

B_13	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE	1	1.0	1	1.0
STRONGLY AGREE	9	8.9	10	9.9
AGREE	19	18.8	29	28.7
NEITHER DISAGREE	31	30.7	60	59.4
DISAGREE	29	28.7	89	88.1
STRONGLY DISAGRE	12	11.9	101	100.0

UNDERSTAND LANGUAGE

B_14	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	16	15.8	16	15.8
AGREE	35	34.7	51	50.5
NEITHER DISAGREE	35	34.7	86	85.1
DISAGREE	11	10.9	97	96.0
STRONGLY DISAGRE	4	4.0	101	100.0

ENTERTAIN CHILDREN

B_15	Frequency	Percent	Cumulative Frequency	Cumulative Percent
STRONGLY AGREE	7	6.9	7	6.9
AGREE	22	21.8	29	28.7
NEITHER DISAGREE	38	37.6	67	66.3
DISAGREE	25	24.8	92	91.1
STRONGLY DISAGRE	9	8.9	101	100.0

VARIETY

B_16	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE	1	1.0	1	1.0
STRONGLY AGREE	32	31.7	33	32.7
AGREE	43	42.6	76	75.2
NEITHER DISAGREE	15	14.9	91	90.1
DISAGREE	8	7.9	99	98.0
STRONGLY DISAGRE	2	2.0	101	100.0

Std Dev	N Obs	Variable	Label	N	Minimum	Maximum	Mean
0.4935224	101	A_01	SEX	101	1.0000000	2.0000000	1.5940594
0.8105737		A_02	AGE	101	1.0000000	4.0000000	2.6237624
0.6386868		A_03	MARITAL STATUS	101	1.0000000	3.0000000	1.8217822
0.9502475		A_04	EDUCATION	101	0	4.0000000	1.7623762
1.1632151		A_05	INCOME	101	0	4.0000000	2.7425743
0.1400141		A_06	PREVIOUS VISIT	101	0	1.0000000	0.9801980
1.5396412		A_07	INFORMATION SOURCE	101	0	5.0000000	2.4554455
0.6594327		A_08	LENGTH OF STAY	101	0	3.0000000	1.6930693
0.4953247		A_09_A	VISIT SYDNEY	101	0	1.0000000	0.4158416
0.4713578		A_09_B	VISIT MELBOURNE	101	0	1.0000000	0.3267327
0.5024692		A_09_C	VISIT GOLD COAST	101	0	1.0000000	0.5049505
0		A_09_D	VISIT ALICE SPRINGS	101	0	0	0
0.2714100		A_09_E	VISIT ADELAIDE	101	0	1.0000000	0.0792079
0.4868570		A_09_F	PERTH	101	0	1.0000000	0.3762376
0.8648241		A_10	EXPENDITURE	101	0	4.0000000	2.1782178
1.1260199		B_01	GUIDED TOUR	101	1.0000000	5.0000000	3.1782178
1.1320707		B_02	RELAX	101	1.0000000	5.0000000	2.6039604
0.9639030		B_03	ADVENTURE AND ESCAPE	101	0	5.0000000	2.0297030
1.1194058		B_04	NIGHT LIFE	101	1.0000000	5.0000000	3.2574257
1.0518254		B_05	BEST PLACES	101	1.0000000	5.0000000	2.7920792
0.9873457		B_06	HISTORY	101	1.0000000	5.0000000	2.6930693
0.8091066		B_07	LOCAL CUSTOMS	101	1.0000000	5.0000000	2.1584158
0.9353350		B_08	FRIENDS VISITED	101	1.0000000	5.0000000	3.3069307
0.8170219		B_09	NEW CULTURE	101	1.0000000	5.0000000	1.9504950
1.0451207		B_10	OWN SCHEDULE	101	1.0000000	5.0000000	2.5148515
0.9378720		B_11	ADVICE TO FRIENDS	101	1.0000000	5.0000000	2.9801980
0.9194273		B_12	LEARN THINGS	101	1.0000000	4.0000000	2.4158416
1.1803675		B_13	TOO MANY THINGS	101	0	5.0000000	3.1287129
1.0158155		B_14	UNDERSTAND LANGUAGE	101	1.0000000	5.0000000	2.5247525
1.0512604		B_15	ENTERTAIN CHILDREN	101	1.0000000	5.0000000	3.0693069
		B_16	VARIETY	101	0	5.0000000	2.0297030

Initial Factor Method: Principal Components

Prior Communality Estimates: ONE

APPENDIX C:

Eigenvalues of the Correlation Matrix: Total = 16 Average = 1

	1	2	3	4	5	6	7	8
Eigenvalue	3.646938	2.147105	1.593428	1.316497	1.099739	0.995308	0.875538	0.699900
Difference	1.499833	0.553676	0.276932	0.216758	0.104430	0.119770	0.175638	0.069231
Proportion	0.2279	0.1342	0.0996	0.0823	0.0687	0.0622	0.0547	0.0437
Cumulative	0.2279	0.3621	0.4617	0.5440	0.6127	0.6749	0.7297	0.7734
	9	10	11	12	13	14	15	16
Eigenvalue	0.630669	0.612088	0.544113	0.483375	0.431050	0.395253	0.357674	0.171325
Difference	0.018580	0.067975	0.060738	0.052325	0.035797	0.037579	0.186349	
Proportion	0.0394	0.0383	0.0340	0.0302	0.0269	0.0247	0.0224	0.0107
Cumulative	0.8128	0.8511	0.8851	0.9153	0.9422	0.9669	0.9893	1.0000

5 factors will be retained by the NFACTOR criterion.

Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	
B_11	0.70454	-0.30301	-0.12302	0.08535	0.01538	ADVICE TO FRIENDS
B_03	0.66446	0.04594	0.07036	-0.09532	-0.02747	ADVENTURE AND ESCAPE
B_07	0.64394	-0.14968	0.29977	0.09393	-0.15127	LOCAL CUSTOMS
B_10	0.62206	-0.39198	-0.34276	0.09659	0.12888	OWN SCHEDULE
B_16	0.56407	0.32552	0.04545	-0.30222	0.31000	VARIETY
B_12	0.48923	-0.17522	0.23594	-0.10829	0.24710	LEARN THINGS
B_14	0.44652	0.37140	0.00273	-0.25619	-0.28784	UNDERSTAND LANGUAGE
B_01	-0.28530	0.69356	0.42784	0.11747	0.13292	GUIDED TOUR
B_15	0.12234	0.64983	0.17889	-0.26057	0.19325	ENTERTAIN CHILDREN
B_05	0.47364	0.52486	-0.31386	0.09510	-0.05863	BEST PLACES
B_06	0.37123	-0.14661	0.59227	0.23535	-0.39282	HISTORY
B_09	0.38666	-0.18247	0.58136	0.20222	0.50175	NEW CULTURE
B_04	0.42065	0.20404	-0.51870	0.03047	0.32154	NIGHT LIFE
B_08	0.12193	0.54432	-0.06028	0.61783	-0.11673	FRIENDS VISITED
B_02	0.39743	0.14304	-0.17763	0.53179	-0.17663	RELAX
B_13	0.43905	0.10285	0.04130	-0.51070	-0.45445	TOO MANY THINGS

Variance explained by each factor

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5
3.646938	2.147105	1.593428	1.316497	1.099739

Final Communality Estimates: Total = 9.803707

B_01	B_02	B_03	B_04	B_05	B_06	B_07	B_08
0.776934	0.523964	0.458409	0.591944	0.610797	0.719783	0.558629	0.710122
B_09	B_10	B_11	B_12	B_13	B_14	B_15	B_16
0.813425	0.684031	0.610845	0.398501	0.672389	0.485813	0.574484	0.613636

Rotation Method: Varimax

APPENDIX D

Orthogonal Transformation Matrix

	1	2	3	4	5
1	0.64549	-0.35603	0.54448	0.33388	0.22056
2	-0.18604	0.75839	0.32700	0.41473	0.33361
3	0.56790	0.50293	0.01536	-0.17158	-0.62839
4	0.08731	-0.07909	-0.55543	0.79462	-0.21494
5	0.46754	0.19719	-0.53654	-0.23592	0.63166

Rotated Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	
B_09	0.86593	0.09929	-0.22173	-0.00401	-0.06744	NEW CULTURE ✓
B_12	0.58846	-0.13111	0.14027	-0.09415	0.08054	LEARN THINGS ✓
B_07	0.55122	-0.22927	0.33527	0.21182	-0.21201	LOCAL CUSTOMS
B_01	0.00218	0.85966	-0.05854	0.18096	-0.04169	GUIDED TOUR
B_15	0.12727	0.59795	0.32290	0.02701	0.30943	ENTERTAIN CHILDREN
B_11	0.45592	-0.54623	0.22698	0.19487	0.12298	ADVICE TO FRIENDS
B_10	0.34849	-0.67336	0.08245	0.15028	0.28247	OWN SCHEDULE
B_13	0.03066	-0.10676	0.80081	-0.11644	-0.07210	TOO MANY THINGS
B_14	0.06374	0.08757	0.66135	0.16698	0.09392	UNDERSTAND LANGUAGE
B_03	0.43915	-0.16422	0.44557	0.15957	0.12080	ADVENTURE AND ESCAPE
B_08	-0.05743	0.26720	-0.03707	0.79528	0.03983	FRIENDS VISITED
B_02	0.09290	-0.19923	0.05984	0.68674	0.02113	RELAX
B_05	0.01074	0.05249	0.40333	0.51906	0.41931	BEST PLACES
B_04	0.09200	-0.19490	0.09835	0.26242	0.68335	NIGHT LIFE
B_16	0.44790	0.15393	0.41581	0.00225	0.46521	VARIETY
B_06	0.44014	-0.04156	0.24333	0.24121	-0.63792	HISTORY

Variance explained by each factor

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5
2.358178	2.151252	2.033865	1.715240	1.545171

Final Communality Estimates: Total = 9.803707

B_01	B_02	B_03	B_04	B_05	B_06	B_07	B_08
0.776934	0.523964	0.458409	0.591944	0.610797	0.719783	0.558629	0.710122
B_09	B_10	B_11	B_12	B_13	B_14	B_15	B_16
0.813425	0.684031	0.610845	0.398501	0.672389	0.485813	0.574784	0.613636

APPENDIX E

SAS

15:02 Thursday, November 25, 1993 1

CORRELATION ANALYSIS

5 'VAR' Variables: B_09 B_01 B_13 B_08 B_04

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
B_09	101	1.950495	0.817022	197.000000	1.000000	5.000000	NEW CULTURE
B_01	101	3.178218	1.126020	321.000000	1.000000	5.000000	GUIDED TOUR
B_13	101	3.128713	1.180367	316.000000	0	5.000000	TOO MANY THINGS
B_08	101	3.306931	0.935335	334.000000	1.000000	5.000000	FRIENDS VISITED
B_04	101	3.257426	1.119406	329.000000	1.000000	5.000000	NIGHT LIFE

Pearson Correlation Coefficients / Prob > |R| under Ho: Rho=0 / N = 101

	B_09	B_01	B_13	B_08	B_04
B_09 NEW CULTURE	1.00000 0.0	0.03143 0.7551	-0.05554 0.5812	-0.00609 0.9518	-0.02966 0.7684
B_01 GUIDED TOUR	0.03143 0.7551	1.00000 0.0	-0.16038 0.1091	0.32734 0.0008	-0.07643 0.4475
B_13 TOO MANY THINGS	-0.05554 0.5812	-0.16038 0.1091	1.00000 0.0	-0.02708 0.7880	0.08820 0.3805
B_08 FRIENDS VISITED	-0.00609 0.9518	0.32734 0.0008	-0.02708 0.7880	1.00000 0.0	0.17211 0.0853
B_04 NIGHT LIFE	-0.02966 0.7684	-0.07643 0.4475	0.08820 0.3805	0.17211 0.0853	1.00000 0.0

Explorer

FREQUENCY TABLE OF
IVE TYPOLOGY:
"HEAVY" & "LIGHT"

F_1	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Heavy	82	81.2	82	81.2
Light	19	18.8	101	100.0

Organised

F_2	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Heavy	30	29.7	30	29.7
Light	71	70.3	101	100.0

Active Tourist

F_3	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Heavy	29	28.7	29	28.7
Light	72	71.3	101	100.0

Pleasure Seeker

F_4	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Heavy	20	19.8	20	19.8
Light	81	80.2	101	100.0

Sophisticate

F_5	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Heavy	26	25.7	26	25.7
Light	75	74.3	101	100.0

Organised

F_2	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Heavy	30	29.7	30	29.7
Light	71	70.3	101	100.0

Active Tourist

F_3	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Heavy	29	28.7	29	28.7
Light	72	71.3	101	100.0

Pleasure Seeker

F_4	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Heavy	20	19.8	20	19.8
Light	81	80.2	101	100.0

Sophisticate

F_5	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Heavy	26	25.7	26	25.7
Light	75	74.3	101	100.0

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	34	41.5	34	41.5
FEMALE	48	58.5	82	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	6	7.3	6	7.3
22-30	31	37.8	37	45.1
31-40	37	45.1	74	90.2
40 YEARS AND OVE	8	9.8	82	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	27	32.9	27	32.9
MARRIED	46	56.1	73	89.0
MARRIED/CHILDREN	9	11.0	82	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY	35	43.2	35	43.2
TERTIARY	35	43.2	70	86.4
VOCATIONAL/TECHN	1	1.2	71	87.7
OTHER	10	12.3	81	100.0

Frequency Missing = 1

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BELOW \$15000	15	18.8	15	18.8
\$15000 TO \$25000	20	25.0	35	43.7
\$25000 TO \$35000	18	22.5	53	66.2
OVER \$36000	27	33.7	80	100.0

Frequency Missing = 2

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE	1	1.2	1	1.2
FRIENDS/ RELATIV	39	47.6	40	48.8
TELEVISION	3	3.7	43	52.4
MAGAZINES	12	14.6	55	67.1
TRAVEL AGENT	20	24.4	75	91.5
OTHER	7	8.5	82	100.0

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	15	50.0	15	50.0
FEMALE	15	50.0	30	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	2	6.7	2	6.7
22-30	9	30.0	11	36.7
31-40	13	43.3	24	80.0
40 YEARS AND OVE	6	20.0	30	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	6	20.0	6	20.0
MARRIED	19	63.3	25	83.3
MARRIED/CHILDREN	5	16.7	30	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY	16	55.2	16	55.2
TERTIARY	8	27.6	24	82.8
OTHER	5	17.2	29	100.0

Frequency Missing = 1

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BELOW \$15000	5	17.9	5	17.9
\$15000 TO \$25000	9	32.1	14	50.0
\$25000 TO \$35000	5	17.9	19	67.9
OVER \$36000	9	32.1	28	100.0

Frequency Missing = 2

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
FRIENDS/ RELATIV	13	43.3	13	43.3
TELEVISION	2	6.7	15	50.0
MAGAZINES	6	20.0	21	70.0
TRAVEL AGENT	6	20.0	27	90.0
OTHER	3	10.0	30	100.0

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	9	31.0	9	31.0
FEMALE	20	69.0	29	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	3	10.3	3	10.3
22-30	13	44.8	16	55.2
31-40	10	34.5	26	89.7
40 YEARS AND OVE	3	10.3	29	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	13	44.8	13	44.8
MARRIED	12	41.4	25	86.2
MARRIED/CHILDREN	4	13.8	29	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY	14	48.3	14	48.3
TERTIARY	11	37.9	25	86.2
OTHER	4	13.8	29	100.0

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BELOW \$15000	4	13.8	4	13.8
\$15000 TO \$25000	4	13.8	8	27.6
\$25000 TO \$35000	10	34.5	18	62.1
OVER \$36000	11	37.9	29	100.0

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
FRIENDS/ RELATIV	12	41.4	12	41.4
TELEVISION	1	3.4	13	44.8
MAGAZINES	6	20.7	19	65.5
TRAVEL AGENT	6	20.7	25	86.2
OTHER	4	13.8	29	100.0

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	11	55.0	11	55.0
FEMALE	9	45.0	20	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	1	5.0	1	5.0
22-30	7	35.0	8	40.0
31-40	11	55.0	19	95.0
40 YEARS AND OVE	1	5.0	20	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	5	25.0	5	25.0
MARRIED	13	65.0	18	90.0
MARRIED/CHILDREN	2	10.0	20	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY	9	45.0	9	45.0
TERTIARY	9	45.0	18	90.0
OTHER	2	10.0	20	100.0

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
\$15000 TO \$25000	7	35.0	7	35.0
\$25000 TO \$35000	6	30.0	13	65.0
OVER \$36000	7	35.0	20	100.0

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
FRIENDS/ RELATIV	7	35.0	7	35.0
TELEVISION	2	10.0	9	45.0
MAGAZINES	2	10.0	11	55.0
TRAVEL AGENT	6	30.0	17	85.0
OTHER	3	15.0	20	100.0

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	15	57.7	15	57.7
FEMALE	11	42.3	26	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	2	7.7	2	7.7
22-30	9	34.6	11	42.3
31-40	13	50.0	24	92.3
40 YEARS AND OVE	2	7.7	26	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	7	26.9	7	26.9
MARRIED	15	57.7	22	84.6
MARRIED/CHILDREN	4	15.4	26	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY	10	38.5	10	38.5
TERTIARY	12	46.2	22	84.6
VOCATIONAL/TECHN	1	3.8	23	88.5
OTHER	3	11.5	26	100.0

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BELOW \$15000	3	11.5	3	11.5
\$15000 TO \$25000	9	34.6	12	46.2
\$25000 TO \$35000	4	15.4	16	61.5
OVER \$36000	10	38.5	26	100.0

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE	1	3.8	1	3.8
FRIENDS/ RELATIV	12	46.2	13	50.0
TELEVISION	2	7.7	15	57.7
MAGAZINES	6	23.1	21	80.8
TRAVEL AGENT	4	15.4	25	96.2
OTHER	1	3.8	26	100.0

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	7	36.8	7	36.8
FEMALE	12	63.2	19	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	2	10.5	2	10.5
22-30	4	21.1	6	31.6
31-40	8	42.1	14	73.7
40 YEARS AND OVE	5	26.3	19	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	4	21.1	4	21.1
MARRIED	11	57.9	15	78.9
MARRIED/CHILDREN	4	21.1	19	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY	11	57.9	11	57.9
TERTIARY	6	31.6	17	89.5
VOCATIONAL/TECHN	1	5.3	18	94.7
OTHER	1	5.3	19	100.0

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BELOW \$15000	1	5.3	1	5.3
\$15000 TO \$25000	4	21.1	5	26.3
\$25000 TO \$35000	5	26.3	10	52.6
OVER \$36000	9	47.4	19	100.0

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
FRIENDS/ RELATIV	8	42.1	8	42.1
MAGAZINES	4	21.1	12	63.2
TRAVEL AGENT	3	15.8	15	78.9
OTHER	4	21.1	19	100.0

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	26	36.6	26	36.6
FEMALE	45	63.4	71	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	6	8.5	6	8.5
22-30	26	36.6	32	45.1
31-40	32	45.1	64	90.1
40 YEARS AND OVE	7	9.9	71	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	25	35.2	25	35.2
MARRIED	38	53.5	63	88.7
MARRIED/CHILDREN	8	11.3	71	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY	30	42.3	30	42.3
TERTIARY	33	46.5	63	88.7
VOCATIONAL/TECHN	2	2.8	65	91.5
OTHER	6	8.5	71	100.0

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BELOW \$15000	11	15.5	11	15.5
\$15000 TO \$25000	15	21.1	26	36.6
\$25000 TO \$35000	18	25.4	44	62.0
OVER \$36000	27	38.0	71	100.0

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
.....				
NULL RESPONSE	1	1.4	1	1.4
FRIENDS/ RELATIV	34	47.9	35	49.3
TELEVISION	1	1.4	36	50.7
MAGAZINES	10	14.1	46	64.8
TRAVEL AGENT	17	23.9	63	88.7
OTHER	8	11.3	71	100.0

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	32	44.4	32	44.4
FEMALE	40	55.6	72	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	5	6.9	5	6.9
22-30	22	30.6	27	37.5
31-40	35	48.6	62	86.1
40 YEARS AND OVE	10	13.9	72	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	18	25.0	18	25.0
MARRIED	45	62.5	63	87.5
MARRIED/CHILDREN	9	12.5	72	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY	32	45.1	32	45.1
TERTIARY	30	42.3	62	87.3
VOCATIONAL/TECHN	2	2.8	64	90.1
OTHER	7	9.9	71	100.0

Frequency Missing = 1

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BELOW \$15000	12	17.1	12	17.1
\$15000 TO \$25000	20	28.6	32	45.7
\$25000 TO \$35000	13	18.6	45	64.3
OVER \$36000	25	35.7	70	100.0

Frequency Missing = 2

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NULL RESPONSE	1	1.4	1	1.4
FRIENDS/ RELATIV	35	48.6	36	50.0
TELEVISION	2	2.8	38	52.8
MAGAZINES	10	13.9	48	66.7
TRAVEL AGENT	17	23.6	65	90.3
OTHER	7	9.7	72	100.0

SEX

	A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE		30	37.0	30	37.0
FEMALE		51	63.0	81	100.0

AGE

	A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21		7	8.6	7	8.6
22-30		28	34.6	35	43.2
31-40		34	42.0	69	85.2
40 YEARS AND OVE		12	14.8	81	100.0

MARITAL STATUS

	A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE		26	32.1	26	32.1
MARRIED		44	54.3	70	86.4
MARRIED/CHILDREN		11	13.6	81	100.0

EDUCATION

	A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY		37	46.2	37	46.2
TERTIARY		32	40.0	69	86.2
VOCATIONAL/TECHN		2	2.5	71	88.7
OTHER		9	11.3	80	100.0

Frequency Missing = 1

INCOME

	A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BELOW \$15000		16	20.3	16	20.3
\$15000 TO \$25000		17	21.5	33	41.8
\$25000 TO \$35000		17	21.5	50	63.3
OVER \$36000		29	36.7	79	100.0

Frequency Missing = 2

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
-----	-----	-----	-----	-----
NULL RESPONSE	1	1.2	1	1.2
FRIENDS/ RELATIV	40	49.4	41	50.6
TELEVISION	1	1.2	42	51.9
MAGAZINES	14	17.3	56	69.1
TRAVEL AGENT	17	21.0	73	90.1
OTHER	8	9.9	81	100.0

SEX

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MALE	26	34.7	26	34.7
FEMALE	49	65.3	75	100.0

AGE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
UNDER 21	6	8.0	6	8.0
22-30	26	34.7	32	42.7
31-40	32	42.7	64	85.3
40 YEARS AND OVE	11	14.7	75	100.0

MARITAL STATUS

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SINGLE	24	32.0	24	32.0
MARRIED	42	56.0	66	88.0
MARRIED/CHILDREN	9	12.0	75	100.0

EDUCATION

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
SECONDARY	36	48.6	36	48.6
TERTIARY	29	39.2	65	87.8
VOCATIONAL/TECHN	1	1.4	66	89.2
OTHER	8	10.8	74	100.0

Frequency Missing = 1

INCOME

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
BELOW \$15000	13	17.8	13	17.8
\$15000 TO \$25000	15	20.5	28	38.4
\$25000 TO \$35000	19	26.0	47	64.4
OVER \$36000	26	35.6	73	100.0

Frequency Missing = 2

INFORMATION SOURCE

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
FRIENDS/ RELATIV	35	46.7	35	46.7
TELEVISION	1	1.3	36	48.0
MAGAZINES	10	13.3	46	61.3
TRAVEL AGENT	19	25.3	65	86.7
OTHER	10	13.3	75	100.0

APPENDIX G
CHI-SQUARE TEST

TABLE OF A_01 BY F_1

A_01(SEX)	F_1(Explorer)		Total
	Heavy	Light	
	Frequency	Frequency	
	Percent	Percent	
MALE	Row Pct	Row Pct	41
	Col Pct	Col Pct	
	34	7	
	33.66	6.93	
FEMALE	82.93	17.07	60
	41.46	36.84	
	48	12	
	47.52	11.88	
Total	80.00	20.00	101
	58.54	63.16	
	82	19	
	81.19	18.81	

STATISTICS FOR TABLE OF A_01 BY F_1

Statistic	DF	Value	Prob
Chi-Square	1	0.137	0.712
Likelihood Ratio Chi-Square	1	0.138	0.711
Continuity Adj. Chi-Square	1	0.012	0.912
Mantel-Haenszel Chi-Square	1	0.135	0.713
Fisher's Exact Test (Left)			0.733
(Right)			0.460
(2-Tail)			0.799
Phi Coefficient		0.037	
Contingency Coefficient		0.037	
Cramer's V		0.037	

Sample Size = 101

TABLE OF A_02 BY F_1

A_02(AGE)	F_1(Explorer)		Total
	Heavy	Light	
	Frequency	Frequency	
	Percent	Percent	
UNDER 21	Row Pct	Row Pct	8
	Col Pct	Col Pct	
	6	2	
	5.94	1.98	
22-30	75.00	25.00	35
	7.32	10.53	
	31	4	
	30.69	3.96	
31-40	88.57	11.43	45
	37.80	21.05	
	37	8	
	36.63	7.92	
40 YEARS AND OVE	82.22	17.78	13
	45.12	42.11	
	8	5	
	7.92	4.95	
Total	61.54	38.46	101
	9.76	26.32	
	82	19	
	81.19	18.81	

STATISTICS FOR TABLE OF A_02 BY F_1

Statistic	DF	Value	Prob
Chi-Square	3	4.768	0.190
Likelihood Ratio Chi-Square	3	4.346	0.226
Mantel-Haenszel Chi-Square	1	1.698	0.193
Phi Coefficient		0.217	
Contingency Coefficient		0.212	
Cramer's V		0.217	

Sample Size = 101
WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_03 BY F_1

A_03(MARITAL STATUS)		F_1(Explorer)		
Frequency				
Percent				
Row Pct				
Col Pct	Heavy	Light	Total	
SINGLE	27	4	31	
	26.73	3.96	30.69	
	87.10	12.90		
	32.93	21.05		
MARRIED	46	11	57	
	45.54	10.89	56.44	
	80.70	19.30		
	56.10	57.89		
MARRIED/CHILDREN	9	4	13	
	8.91	3.96	12.87	
	69.23	30.77		
	10.98	21.05		
Total	82	19	101	
	81.19	18.81	100.00	

STATISTICS FOR TABLE OF A_03 BY F_1

Statistic	DF	Value	Prob
Chi-Square	2	1.934	0.380
Likelihood Ratio Chi-Square	2	1.855	0.396
Mantel-Haenszel Chi-Square	1	1.822	0.177
Phi Coefficient		0.138	
Contingency Coefficient		0.137	
Cramer's V		0.138	

Sample Size = 101

TABLE OF A_04 BY F_1

A_04(EDUCATION)	F_1(Explorer)		
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
SECONDARY	35	11	46
	35.00	11.00	46.00
	76.09	23.91	
	43.21	57.89	
TERTIARY	35	6	41
	35.00	6.00	41.00
	85.37	14.63	
	43.21	31.58	
VOCATIONAL/TECHN	1	1	2
	1.00	1.00	2.00
	50.00	50.00	
	1.23	5.26	
OTHER	10	1	11
	10.00	1.00	11.00
	90.91	9.09	
	12.35	5.26	
Total	81	19	100
	81.00	19.00	100.00

Frequency Missing = 1

STATISTICS FOR TABLE OF A_04 BY F_1

Statistic	DF	Value	Prob
Chi-Square	3	3.180	0.365
Likelihood Ratio Chi-Square	3	3.026	0.388
Mantel-Haenszel Chi-Square	1	1.077	0.299
Phi Coefficient		0.178	
Contingency Coefficient		0.176	
Cramer's V		0.178	

Effective Sample Size = 100

Frequency Missing = 1

WARNING: 38% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_05 BY F_1

A_05(INCOME)	F_1(Explorer)		
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
BELOW \$15000	15	1	16
	15.15	1.01	16.16
	93.75	6.25	
	18.75	5.26	
\$15000 TO \$25000	20	4	24
	20.20	4.04	24.24
	83.33	16.67	
	25.00	21.05	
\$25000 TO \$35000	18	5	23
	18.18	5.05	23.23
	78.26	21.74	
	22.50	26.32	
OVER \$36000	27	9	36
	27.27	9.09	36.36
	75.00	25.00	
	33.75	47.37	
Total	80	19	99
	80.81	19.19	100.00

Frequency Missing = 2

STATISTICS FOR TABLE OF A_05 BY F_1

Statistic	DF	Value	Prob
Chi-Square	3	2.706	0.439
Likelihood Ratio Chi-Square	3	3.139	0.371
Mantel-Haenszel Chi-Square	1	2.488	0.115
Phi Coefficient		0.165	
Contingency Coefficient		0.163	
Cramer's V		0.165	

Effective Sample Size = 99
Frequency Missing = 2
WARNING: 38% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_07 BY F_1

A_07(INFORMATION SOURCE)		F_1(Explorer)	
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
NULL RESPONSE	1	0	1
	0.99	0.00	0.99
	100.00	0.00	
	1.22	0.00	
FRIENDS/ RELATIV	39	8	47
	38.61	7.92	46.53
	82.98	17.02	
	47.56	42.11	
TELEVISION	3	0	3
	2.97	0.00	2.97
	100.00	0.00	
	3.66	0.00	
MAGAZINES	12	4	16
	11.88	3.96	15.84
	75.00	25.00	
	14.63	21.05	
TRAVEL AGENT	20	3	23
	19.80	2.97	22.77
	86.96	13.04	
	24.39	15.79	
OTHER	7	4	11
	6.93	3.96	10.89
	63.64	36.36	
	8.54	21.05	
Total	82	19	101
	81.19	18.81	100.00

STATISTICS FOR TABLE OF A_07 BY F_1

Statistic	DF	Value	Prob
Chi-Square	5	4.146	0.529
Likelihood Ratio Chi-Square	5	4.552	0.473
Mantel-Haenszel Chi-Square	1	0.782	0.377
Phi Coefficient		0.203	
Contingency Coefficient		0.199	
Cramer's V		0.203	

Sample Size = 101
WARNING: 58% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_01 BY F_2

A_01(SEX)	F_2(Organised)		
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
MALE	15	26	41
	14.85	25.74	40.59
	36.59	63.41	
	50.00	36.62	
FEMALE	15	45	60
	14.85	44.55	59.41
	25.00	75.00	
	50.00	63.38	
Total	30	71	101
	29.70	70.30	100.00

STATISTICS FOR TABLE OF A_01 BY F_2

Statistic	DF	Value	Prob
Chi-Square	1	1.566	0.211
Likelihood Ratio Chi-Square	1	1.551	0.213
Continuity Adj. Chi-Square	1	1.060	0.303
Mantel-Haenszel Chi-Square	1	1.550	0.213
Fisher's Exact Test (Left)			0.929
(Right)			0.152
(2-Tail)			0.269
Phi Coefficient		0.125	
Contingency Coefficient		0.124	
Cramer's V		0.125	

Sample Size = 101

TABLE OF A_02 BY F_2

A_02(AGE)	F_2(Organised)		
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
UNDER 21	2	6	8
	1.98	5.94	7.92
	25.00	75.00	
	6.67	8.45	
22-30	9	26	35
	8.91	25.74	34.65
	25.71	74.29	
	30.00	36.62	
31-40	13	32	45
	12.87	31.68	44.55
	28.89	71.11	
	43.33	45.07	
40 YEARS AND OVE	6	7	13
	5.94	6.93	12.87
	46.15	53.85	
	20.00	9.86	
Total	30	71	101
	29.70	70.30	100.00

STATISTICS FOR TABLE OF A_02 BY F_2

Statistic	DF	Value	Prob
Chi-Square	3	2.051	0.562
Likelihood Ratio Chi-Square	3	1.933	0.587
Mantel-Haenszel Chi-Square	1	1.326	0.249
Phi Coefficient		0.142	
Contingency Coefficient		0.141	
Cramer's V		0.142	

Sample Size = 101

WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_03 BY F_2

A_03(MARITAL STATUS)		F_2(Organised)		
Frequency				
Percent				
Row Pct				
Col Pct	Heavy	Light	Total	
SINGLE	6	25	31	
	5.94	24.75	30.69	
	19.35	80.65		
	20.00	35.21		
MARRIED	19	38	57	
	18.81	37.62	56.44	
	33.33	66.67		
	63.33	53.52		
MARRIED/CHILDREN	5	8	13	
	4.95	7.92	12.87	
	38.46	61.54		
	16.67	11.27		
Total	30	71	101	
	29.70	70.30	100.00	

STATISTICS FOR TABLE OF A_03 BY F_2

Statistic	DF	Value	Prob
Chi-Square	2	2.427	0.297
Likelihood Ratio Chi-Square	2	2.534	0.282
Mantel-Haenszel Chi-Square	1	2.196	0.138
Phi Coefficient		0.155	
Contingency Coefficient		0.153	
Cramer's V		0.155	

Sample Size = 101

TABLE OF A_04 BY F_2

A_04(EDUCATION)	F_2(Organised)		
	Heavy	Light	Total
SECONDARY	16 16.00 34.78 55.17	30 30.00 65.22 42.25	46 46.00
TERTIARY	8 8.00 19.51 27.59	33 33.00 80.49 46.48	41 41.00
VOCATIONAL/TECHN	0 0.00 0.00 0.00	2 2.00 100.00 2.82	2 2.00
OTHER	5 5.00 45.45 17.24	6 6.00 54.55 8.45	11 11.00
Total	29 29.00	71 71.00	100 100.00

Frequency Missing = 1

STATISTICS FOR TABLE OF A_04 BY F_2

Statistic	DF	Value	Prob
Chi-Square	3	4.803	0.187
Likelihood Ratio Chi-Square	3	5.359	0.147
Mantel-Haenszel Chi-Square	1	0.008	0.929
Phi Coefficient		0.219	
Contingency Coefficient		0.214	
Cramer's V		0.219	

Effective Sample Size = 100

Frequency Missing = 1

WARNING: 38% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_05 BY F_2

A_05(INCOME)	F_2(Organised)		
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
BELOW \$15000	5	11	16
	5.05	11.11	16.16
	31.25	68.75	
	17.86	15.49	
\$15000 TO \$25000	9	15	24
	9.09	15.15	24.24
	37.50	62.50	
	32.14	21.13	
\$25000 TO \$35000	5	18	23
	5.05	18.18	23.23
	21.74	78.26	
	17.86	25.35	
OVER \$36000	9	27	36
	9.09	27.27	36.36
	25.00	75.00	
	32.14	38.03	
Total	28	71	99
	28.28	71.72	100.00

Frequency Missing = 2

STATISTICS FOR TABLE OF A_05 BY F_2

Statistic	DF	Value	Prob
Chi-Square	3	1.751	0.626
Likelihood Ratio Chi-Square	3	1.727	0.631
Mantel-Haenszel Chi-Square	1	0.767	0.381
Phi Coefficient		0.133	
Contingency Coefficient		0.132	
Cramer's V		0.133	

Effective Sample Size = 99
Frequency Missing = 2

TABLE OF A_07 BY F_2

A_07(INFORMATION SOURCE) F_2(Organised)

Frequency Percent Row Pct Col Pct	Heavy	Light	Total
NULL RESPONSE	0 0.00 0.00 0.00	1 0.99 100.00 1.41	1 0.99
FRIENDS/ RELATIV	13 12.87 27.66 43.33	34 33.66 72.34 47.89	47 46.53
TELEVISION	2 1.98 66.67 6.67	1 0.99 33.33 1.41	3 2.97
MAGAZINES	6 5.94 37.50 20.00	10 9.90 62.50 14.08	16 15.84
TRAVEL AGENT	6 5.94 26.09 20.00	17 16.83 73.91 23.94	23 22.77
OTHER	3 2.97 27.27 10.00	8 7.92 72.73 11.27	11 10.89
Total	30 29.70	71 70.30	101 100.00

STATISTICS FOR TABLE OF A_07 BY F_2

Statistic	DF	Value	Prob
Chi-Square	5	3.121	0.681
Likelihood Ratio Chi-Square	5	3.167	0.674
Mantel-Haenszel Chi-Square	1	0.002	0.962
Phi Coefficient		0.176	
Contingency Coefficient		0.173	
Cramer's V		0.176	

Sample Size = 101
WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_01 BY F_3

A_01(SEX)	F_3(Active Tourist)		
	Heavy	Light	Total
	Frequency	Percent	Row Pct
MALE	Col Pct		
	9	32	41
	8.91	31.68	40.59
	21.95	78.05	
FEMALE	31.03	44.44	
	20	40	60
	19.80	39.60	59.41
	33.33	66.67	
Total	68.97	55.56	
	29	72	101
	28.71	71.29	100.00

STATISTICS FOR TABLE OF A_01 BY F_3

Statistic	DF	Value	Prob
Chi-Square	1	1.542	0.214
Likelihood Ratio Chi-Square	1	1.574	0.210
Continuity Adj. Chi-Square	1	1.036	0.309
Mantel-Haenszel Chi-Square	1	1.526	0.217
Fisher's Exact Test (Left)			0.154
(Right)			0.930
(2-Tail)			0.266
Phi Coefficient		-0.124	
Contingency Coefficient		0.123	
Cramer's V		-0.124	

Sample Size = 101

TABLE OF A_02 BY F_3

A_02(AGE)	F_3(Active Tourist)		
	Heavy	Light	Total
	Frequency	Percent	Row Pct
UNDER 21	Col Pct		
	3	5	8
	2.97	4.95	7.92
	37.50	62.50	
22-30	10.34	6.94	
	13	22	35
	12.87	21.78	34.65
	37.14	62.86	
31-40	44.83	30.56	
	10	35	45
	9.90	34.65	44.55
	22.22	77.78	
40 YEARS AND OVE	34.48	48.61	
	3	10	13
	2.97	9.90	12.87
	23.08	76.92	
Total	10.34	13.89	
	29	72	101
	28.71	71.29	100.00

STATISTICS FOR TABLE OF A_02 BY F_3

Statistic	DF	Value	Prob
Chi-Square	3	2.645	0.450
Likelihood Ratio Chi-Square	3	2.628	0.453
Mantel-Haenszel Chi-Square	1	1.907	0.167
Phi Coefficient		0.162	
Contingency Coefficient		0.160	
Cramer's V		0.162	

Sample Size = 101
WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_03 BY F_3

A_03(MARITAL STATUS) F_3(Active Tourist)

Frequency Percent Row Pct Col Pct	Heavy	Light	Total
SINGLE	13 12.87 41.94 44.83	18 17.82 58.06 25.00	31 30.69
MARRIED	12 11.88 21.05 41.38	45 44.55 78.95 62.50	57 56.44
MARRIED/CHILDREN	4 3.96 30.77 13.79	9 8.91 69.23 12.50	13 12.87
Total	29 28.71	72 71.29	101 100.00

STATISTICS FOR TABLE OF A_03 BY F_3

Statistic	DF	Value	Prob
Chi-Square	2	4.309	0.116
Likelihood Ratio Chi-Square	2	4.227	0.121
Mantel-Haenszel Chi-Square	1	1.741	0.187
Phi Coefficient		0.207	
Contingency Coefficient		0.202	
Cramer's V		0.207	

Sample Size = 101

TABLE OF A_04 BY F_3

A_04(EDUCATION)	F_3(Active Tourist)		
Frequency Percent Row Pct Col Pct	Heavy	Light	Total
SECONDARY	14 14.00 30.43 48.28	32 32.00 69.57 45.07	46 46.00
TERTIARY	11 11.00 26.83 37.93	30 30.00 73.17 42.25	41 41.00
VOCATIONAL/TECHN	0 0.00 0.00 0.00	2 2.00 100.00 2.82	2 2.00
OTHER	4 4.00 36.36 13.79	7 7.00 63.64 9.86	11 11.00
Total	29 29.00	71 71.00	100 100.00

Frequency Missing = 1

STATISTICS FOR TABLE OF A_04 BY F_3

Statistic	DF	Value	Prob
Chi-Square	3	1.246	0.742
Likelihood Ratio Chi-Square	3	1.788	0.618
Mantel-Haenszel Chi-Square	1	0.008	0.929
Phi Coefficient		0.112	
Contingency Coefficient		0.111	
Cramer's V		0.112	

Effective Sample Size = 100
Frequency Missing = 1
WARNING: 38% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_05 BY F_3

A_05(INCOME)	F_3(Active Tourist)		
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
BELOW \$15000	4	12	16
	4.04	12.12	16.16
	25.00	75.00	
	13.79	17.14	
\$15000 TO \$25000	4	20	24
	4.04	20.20	24.24
	16.67	83.33	
	13.79	28.57	
\$25000 TO \$35000	10	13	23
	10.10	13.13	23.23
	43.48	56.52	
	34.48	18.57	
OVER \$36000	11	25	36
	11.11	25.25	36.36
	30.56	69.44	
	37.93	35.71	
Total	29	70	99
	29.29	70.71	100.00

Frequency Missing = 2

STATISTICS FOR TABLE OF A_05 BY F_3

Statistic	DF	Value	Prob
Chi-Square	3	4.252	0.236
Likelihood Ratio Chi-Square	3	4.311	0.230
Mantel-Haenszel Chi-Square	1	0.940	0.332
Phi Coefficient		0.207	
Contingency Coefficient		0.203	
Cramer's V		0.207	

Effective Sample Size = 99
Frequency Missing = 2

TABLE OF A_07 BY F_3

A_07(INFORMATION SOURCE) F_3(Active Tourist)

Frequency Percent Row Pct Col Pct	Heavy	Light	Total
NULL RESPONSE	0 0.00 0.00 0.00	1 0.99 100.00 1.39	1 0.99
FRIENDS/ RELATIV	12 11.88 25.53 41.38	35 34.65 74.47 48.61	47 46.53
TELEVISION	1 0.99 33.33 3.45	2 1.98 66.67 2.78	3 2.97
MAGAZINES	6 5.94 37.50 20.69	10 9.90 62.50 13.89	16 15.84
TRAVEL AGENT	6 5.94 26.09 20.69	17 16.83 73.91 23.61	23 22.77
OTHER	4 3.96 36.36 13.79	7 6.93 63.64 9.72	11 10.89
Total	29 28.71	72 71.29	101 100.00

STATISTICS FOR TABLE OF A_07 BY F_3

Statistic	DF	Value	Prob
Chi-Square	5	1.662	0.894
Likelihood Ratio Chi-Square	5	1.897	0.863
Mantel-Haenszel Chi-Square	1	0.469	0.494
Phi Coefficient		0.128	
Contingency Coefficient		0.127	
Cramer's V		0.128	

Sample Size = 101
WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_01 BY F_4

A_01(SEX)		F_4(Pleasure Seeker)		
Frequency				
Percent				
Row Pct				
Col Pct				
	Heavy	Light	Total	
MALE	11	30	41	
	10.89	29.70	40.59	
	26.83	73.17		
	55.00	37.04		
FEMALE	9	51	60	
	8.91	50.50	59.41	
	15.00	85.00		
	45.00	62.96		
Total	20	81	101	
	19.80	80.20	100.00	

STATISTICS FOR TABLE OF A_01 BY F_4

Statistic	DF	Value	Prob
Chi-Square	1	2.146	0.143
Likelihood Ratio Chi-Square	1	2.112	0.146
Continuity Adj. Chi-Square	1	1.466	0.226
Mantel-Haenszel Chi-Square	1	2.125	0.145
Fisher's Exact Test (Left)			0.956
(Right)			0.114
(2-Tail)			0.203
Phi Coefficient		0.146	
Contingency Coefficient		0.144	
Cramer's V		0.146	

Sample Size = 101

TABLE OF A_02 BY F_4

A_02(AGE)		F_4(Pleasure Seeker)		
Frequency				
Percent				
Row Pct				
Col Pct				
	Heavy	Light	Total	
UNDER 21	1	7	8	
	0.99	6.93	7.92	
	12.50	87.50		
	5.00	8.64		
22-30	7	28	35	
	6.93	27.72	34.65	
	20.00	80.00		
	35.00	34.57		
31-40	11	34	45	
	10.89	33.66	44.55	
	24.44	75.56		
	55.00	41.98		
40 YEARS AND OVE	1	12	13	
	0.99	11.88	12.87	
	7.69	92.31		
	5.00	14.81		
Total	20	81	101	
	19.80	80.20	100.00	

STATISTICS FOR TABLE OF A_02 BY F_4

Statistic	DF	Value	Prob
Chi-Square	3	2.081	0.556
Likelihood Ratio Chi-Square	3	2.363	0.500
Mantel-Haenszel Chi-Square	1	0.021	0.884
Phi Coefficient		0.144	
Contingency Coefficient		0.142	
Cramer's V		0.144	

Sample Size = 101

WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_03 BY F_4

A_03(MARITAL STATUS) F_4(Pleasure Seeker)

Frequency Percent Row Pct Col Pct	Heavy	Light	Total
SINGLE	5 4.95 16.13 25.00	26 25.74 83.87 32.10	31 30.69
MARRIED	13 12.87 22.81 65.00	44 43.56 77.19 54.32	57 56.44
MARRIED/CHILDREN	2 1.98 15.38 10.00	11 10.89 84.62 13.58	13 12.87
Total	20 19.80	81 80.20	101 100.00

STATISTICS FOR TABLE OF A_03 BY F_4

Statistic	DF	Value	Prob
Chi-Square	2	0.747	0.688
Likelihood Ratio Chi-Square	2	0.760	0.684
Mantel-Haenszel Chi-Square	1	0.049	0.825
Phi Coefficient		0.086	
Contingency Coefficient		0.086	
Cramer's V		0.086	

Sample Size = 101

TABLE OF A_04 BY F_4

A_04(EDUCATION)		F_4(Pleasure Seeker)	
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
SECONDARY	9	37	46
	9.00	37.00	46.00
	19.57	80.43	
	45.00	46.25	
TERTIARY	9	32	41
	9.00	32.00	41.00
	21.95	78.05	
	45.00	40.00	
VOCATIONAL/TECHN	0	2	2
	0.00	2.00	2.00
	0.00	100.00	
	0.00	2.50	
OTHER	2	9	11
	2.00	9.00	11.00
	18.18	81.82	
	10.00	11.25	
Total	20	80	100
	20.00	80.00	100.00

Frequency Missing = 1

STATISTICS FOR TABLE OF A_04 BY F_4

Statistic	DF	Value	Prob
Chi-Square	3	0.626	0.891
Likelihood Ratio Chi-Square	3	1.017	0.797
Mantel-Haenszel Chi-Square	1	0.026	0.873
Phi Coefficient		0.079	
Contingency Coefficient		0.079	
Cramer's V		0.079	

Effective Sample Size = 100
Frequency Missing = 1
WARNING: 38% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_05 BY F_4

A_05(INCOME)	F_4(Pleasure Seeker)		
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
BELOW \$15000	0	16	16
	0.00	16.16	16.16
	0.00	100.00	
	0.00	20.25	
\$15000 TO \$25000	7	17	24
	7.07	17.17	24.24
	29.17	70.83	
	35.00	21.52	
\$25000 TO \$35000	6	17	23
	6.06	17.17	23.23
	26.09	73.91	
	30.00	21.52	
OVER \$36000	7	29	36
	7.07	29.29	36.36
	19.44	80.56	
	35.00	36.71	
Total	20	79	99
	20.20	79.80	100.00

Frequency Missing = 2

STATISTICS FOR TABLE OF A_05 BY F_4

Statistic	DF	Value	Prob
Chi-Square	3	5.754	0.124
Likelihood Ratio Chi-Square	3	8.787	0.032
Mantel-Haenszel Chi-Square	1	0.836	0.361
Phi Coefficient		0.241	
Contingency Coefficient		0.234	
Cramer's V		0.241	

Effective Sample Size = 99

Frequency Missing = 2

WARNING: 38% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_07 BY F_4

A_07(INFORMATION SOURCE)		F_4(Pleasure Seeker)	
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
NULL RESPONSE	0	1	1
	0.00	0.99	0.99
	0.00	100.00	
	0.00	1.23	
FRIENDS/ RELATIV	7	40	47
	6.93	39.60	46.53
	14.89	85.11	
	35.00	49.38	
TELEVISION	2	1	3
	1.98	0.99	2.97
	66.67	33.33	
	10.00	1.23	
MAGAZINES	2	14	16
	1.98	13.86	15.84
	12.50	87.50	
	10.00	17.28	
TRAVEL AGENT	6	17	23
	5.94	16.83	22.77
	26.09	73.91	
	30.00	20.99	
OTHER	3	8	11
	2.97	7.92	10.89
	27.27	72.73	
	15.00	9.88	
Total	20	81	101
	19.80	80.20	100.00

STATISTICS FOR TABLE OF A_07 BY F_4

Statistic	DF	Value	Prob
Chi-Square	5	6.605	0.252
Likelihood Ratio Chi-Square	5	5.794	0.327
Mantel-Haenszel Chi-Square	1	1.249	0.264
Phi Coefficient		0.256	
Contingency Coefficient		0.248	
Cramer's V		0.256	

Sample Size = 101
WARNING: 58% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_01 BY F_5

A_01(SEX)	F_5(Sophisticate)		
	Heavy	Light	Total
MALE	15	26	41
	14.85	25.74	40.59
	36.59	63.41	
	57.69	34.67	
FEMALE	11	49	60
	10.89	48.51	59.41
	18.33	81.67	
	42.31	65.33	
Total	26	75	101
	25.74	74.26	100.00

STATISTICS FOR TABLE OF A_01 BY F_5

Statistic	DF	Value	Prob
Chi-Square	1	4.245	0.039
Likelihood Ratio Chi-Square	1	4.190	0.041
Continuity Adj. Chi-Square	1	3.344	0.067
Mantel-Haenszel Chi-Square	1	4.203	0.040
Fisher's Exact Test (Left)			0.989
(Right)			3.44E-02
(2-Tail)			6.25E-02
Phi Coefficient		0.205	
Contingency Coefficient		0.201	
Cramer's V		0.205	

Sample Size = 101

TABLE OF A_02 BY F_5

A_02(AGE)	F_5(Sophisticate)		
	Heavy	Light	Total
UNDER 21	2	6	8
	1.98	5.94	7.92
	25.00	75.00	
	7.69	8.00	
22-30	9	26	35
	8.91	25.74	34.65
	25.71	74.29	
	34.62	34.67	
31-40	13	32	45
	12.87	31.68	44.55
	28.89	71.11	
	50.00	42.67	
40 YEARS AND OVE	2	11	13
	1.98	10.89	12.87
	15.38	84.62	
	7.69	14.67	
Total	26	75	101
	25.74	74.26	100.00

STATISTICS FOR TABLE OF A_02 BY F_5

Statistic	DF	Value	Prob
Chi-Square	3	0.965	0.810
Likelihood Ratio Chi-Square	3	1.043	0.791
Mantel-Haenszel Chi-Square	1	0.117	0.732
Phi Coefficient		0.098	
Contingency Coefficient		0.097	
Cramer's V		0.098	

Sample Size = 101
WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_03 BY F_5

A_03(MARITAL STATUS) F_5(Sophisticate)

Frequency Percent Row Pct Col Pct	Heavy	Light	Total
SINGLE	7 6.93 22.58 26.92	24 23.76 77.42 32.00	31 30.69
MARRIED	15 14.85 26.32 57.69	42 41.58 73.68 56.00	57 56.44
MARRIED/CHILDREN	4 3.96 30.77 15.38	9 8.91 69.23 12.00	13 12.87
Total	26 25.74	75 74.26	101 100.00

STATISTICS FOR TABLE OF A_03 BY F_5

Statistic	DF	Value	Prob
Chi-Square	2	0.344	0.842
Likelihood Ratio Chi-Square	2	0.342	0.843
Mantel-Haenszel Chi-Square	1	0.339	0.560
Phi Coefficient		0.058	
Contingency Coefficient		0.058	
Cramer's V		0.058	

Sample Size = 101

TABLE OF A_04 BY F_5

A_04(EDUCATION)		F_5(Sophisticate)	
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
SECONDARY	10	36	46
	10.00	36.00	46.00
	21.74	78.26	
	38.46	48.65	
TERTIARY	12	29	41
	12.00	29.00	41.00
	29.27	70.73	
	46.15	39.19	
VOCATIONAL/TECHN	1	1	2
	1.00	1.00	2.00
	50.00	50.00	
	3.85	1.35	
OTHER	3	8	11
	3.00	8.00	11.00
	27.27	72.73	
	11.54	10.81	
Total	26	74	100
	26.00	74.00	100.00

Frequency Missing = 1

STATISTICS FOR TABLE OF A_04 BY F_5

Statistic	DF	Value	Prob
Chi-Square	3	1.270	0.736
Likelihood Ratio Chi-Square	3	1.206	0.752
Mantel-Haenszel Chi-Square	1	0.437	0.509
Phi Coefficient		0.113	
Contingency Coefficient		0.112	
Cramer's V		0.113	

Effective Sample Size = 100

Frequency Missing = 1

WARNING: 38% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

TABLE OF A_05 BY F_5

A_05(INCOME)	F_5(Sophisticate)		
Frequency			
Percent			
Row Pct			
Col Pct	Heavy	Light	Total
BELOW \$15000	3	13	16
	3.03	13.13	16.16
	18.75	81.25	
	11.54	17.81	
\$15000 TO \$25000	9	15	24
	9.09	15.15	24.24
	37.50	62.50	
	34.62	20.55	
\$25000 TO \$35000	4	19	23
	4.04	19.19	23.23
	17.39	82.61	
	15.38	26.03	
OVER \$36000	10	26	36
	10.10	26.26	36.36
	27.78	72.22	
	38.46	35.62	
Total	26	73	99
	26.26	73.74	100.00

Frequency Missing = 2

STATISTICS FOR TABLE OF A_05 BY F_5

Statistic	DF	Value	Prob
Chi-Square	3	3.009	0.390
Likelihood Ratio Chi-Square	3	3.014	0.390
Mantel-Haenszel Chi-Square	1	0.003	0.958
Phi Coefficient		0.174	
Contingency Coefficient		0.172	
Cramer's V		0.174	

Effective Sample Size = 99
Frequency Missing = 2

TABLE OF A_07 BY F_5

A_07(INFORMATION SOURCE) F_5(Sophisticate)

Frequency Percent Row Pct Col Pct	Heavy	Light	Total
NULL RESPONSE	1 0.99 100.00 3.85	0 0.00 0.00 0.00	1 0.99
FRIENDS/ RELATIV	12 11.88 25.53 46.15	35 34.65 74.47 46.67	47 46.53
TELEVISION	2 1.98 66.67 7.69	1 0.99 33.33 1.33	3 2.97
MAGAZINES	6 5.94 37.50 23.08	10 9.90 62.50 13.33	16 15.84
TRAVEL AGENT	4 3.96 17.39 15.38	19 18.81 82.61 25.33	23 22.77
OTHER	1 0.99 9.09 3.85	10 9.90 90.91 13.33	11 10.89
Total	26 25.74	75 74.26	101 100.00

STATISTICS FOR TABLE OF A_07 BY F_5

Statistic	DF	Value	Prob
Chi-Square	5	9.106	0.105
Likelihood Ratio Chi-Square	5	8.864	0.115
Mantel-Haenszel Chi-Square	1	1.708	0.191
Phi Coefficient		0.300	
Contingency Coefficient		0.288	
Cramer's V		0.300	

Sample Size = 101
WARNING: 50% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

APPENDIX H

KOLMOGONOR SMIRNOV SAMPLE TESTING

FACTOR 1 (EXPLORER)

CATERGORY	HEAVY	LIGHT	DIFFERENCE
SEX			
Male	41.46	36.84	4.62
Female	100	100.00	0
AGE			
Under 21	7.32	10.53	3.21
22 - 30	45.12	31.58	13.54
31 - 40	90.24	73.69	16.55
40 Over	100	100.00	0
MARITAL STATUS			
Single	32.93	21.05	11.88
Married	89.03	78.94	10.09
Married/Children	100	100.00	0
EDUCATION			
Secondary	43.21	57.89	14.68
Tertiary	86.42	89.47	3.05
Voc/Tech.	87.65	94.73	7.0
Other	100	100.00	0
ANNUAL TOTAL INCOME			
Below \$15,000	18.75	5.26	13.49
\$15,000 - \$25,000	43.75	26.31	17.44
\$25,000 - \$35,000	66.25	52.63	13.62
\$36,000 Over	100.00	100.00	0

=====

FACTOR 1 (EXPLORER)

CATEGORY	HEAVY	LIGHT	DIFFERENCE
INFORMATION SOURCE			
null	1.22	0	1.22
Friends/ Relatives	48.78	42.11	6.67
TV	52.44	42.11	6.67
Magazine	67.07	63.16	3.91
Travel Agent	91.46	78.95	12.51
Other	100	100.00	0

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

$$\text{FORMULA: } \frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

$$\begin{aligned} \text{SEX : } & \quad 4 (.0462 \times .0462) \times (1558) \\ & = \frac{\quad \quad \quad}{101} \\ & = 0.131 \end{aligned}$$

$$\begin{aligned} \text{AGE:} & \quad 4 (.1655 \times .1655) \times (1588) \\ & = \frac{\quad \quad \quad}{101} \\ & = 1.690 \end{aligned}$$

$$\begin{aligned} \text{MARITAL:} & \\ \text{STATUS} & = \frac{4 (.1188 \times .1188) \times (1558)}{101} \\ & = 0.870 \end{aligned}$$

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

$$\text{FORMULA: } \frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

$$\begin{aligned} \text{EDUCATION : } & \frac{4 (.1468 \times .1468) \times (1539)}{100} \\ & = 1.326 \end{aligned}$$

$$\begin{aligned} \text{ANNUAL TOTAL} \\ \text{INCOME:} & \frac{4 (.1744 \times .1744) \times (1520)}{100} \\ & = 1.849 \end{aligned}$$

$$\begin{aligned} \text{INFORMATION:} \\ \text{SOURCE} & = \frac{4 (.1251 \times .1251) \times (1558)}{101} \\ & = 0.965 \end{aligned}$$

FACTOR 2 (ORGANISED TOURIST)

CATERGORY	HEAVY	LIGHT	DIFFERENCE
SEX			
Male	50	36.62	13.38
Female	100	100	0
AGE			
Under 21	6.67	8.45	1.78
22 - 30	36.67	45.07	8.40
31 - 40	80.00	90.14	10.14
40 Over	100	100.00	0
MARITAL STATUS			
Single	20	35.21	15.21
Married	83.33	88.73	5.40
Married/Children	100	100.00	0
EDUCATION			
Secondary	55.17	42.25	12.92
Tertiary	82.76	88.73	5.97
Voc/Tech.	82.76	91.55	8.97
Other	100	100.00	0
ANNUAL TOTAL INCOME			
Below \$15,000	17.86	15.49	2.37
\$15,000 - \$25,000	50.00	36.62	13.38
\$25,000 - \$35,000	67.86	61.97	5.89
\$36,000 Over	100	100.00	0

FACTOR 2 (ORGANISED TOURIST)

CATERGORY	HEAVY	LIGHT	DIFFERENCE
INFORMATION SOURCE			
Null	0	1.14	1.14
Friends/ Relatives	43.33	49.03	5.70
TV	50.00	50.71	0.71
Magazine	70.00	64.79	5.21
Travel Agent	90.00	88.73	1.27
Other	100	100.00	0

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

$$\text{FORMULA: } \frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

SEX :

$$= \frac{4 (.1338 \times .1338) \times (2130)}{101}$$

$$= 1.510$$

AGE:

$$= \frac{4 (.1014 \times .1014) \times (2130)}{101}$$

$$= 0.867$$

MARITAL:
STATUS

$$= \frac{4 (.1521 \times .1521) \times (2130)}{101}$$

$$= 1.951$$

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

$$\text{FORMULA: } \frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

$$\begin{aligned} \text{EDUCATION :} & \quad \frac{4 (0.1291 \times 0.1292) \times (2059)}{100} \\ & = 1.374 \end{aligned}$$

ANNUAL TOTAL
INCOME:

$$\begin{aligned} & \quad \frac{4 (.1338 \times .1338) \times (1988)}{99} \\ & = 1.437 \end{aligned}$$

INFORMATION:
SOURCE

$$\begin{aligned} & \quad \frac{4 (.0570 \times .0570) \times (2130)}{101} \\ & = 0.274 \end{aligned}$$

FACTOR 3 (ACTIVE TOURIST)

CATERGORY	HEAVY	LIGHT	DIFFERENCE
SEX			
Male	31.03	44.44	13.41
Female	100	100	0
AGE			
Under 21	10.34	6.94	3.40
22 - 30	55.17	37.50	17.67
31 - 40	89.65	86.11	3.54
40 Over	100.00	100.00	0
MARITAL STATUS			
Single	44.83	25.00	19.83
Married	86.21	87.50	1.29
Married/Children	100.00	100.00	0
EDUCATION			
Secondary	48.28	45.07	3.21
Tertiary	86.21	87.32	1.11
Voc/Tech.	86.21	90.14	3.93
Other	100.00	100.00	0
ANNUAL TOTAL INCOME			
Below \$15,000	13.79	17.14	3.35
\$15,000 - \$25,000	27.58	45.71	18.13
\$25,000 - \$35,000	62.08	64.28	2.20
\$36,000 Over	100.00	100.00	0

FACTOR 3 (ACTIVE TOURIST)

CATERGORY	HEAVY	LIGHT	DIFFERENCE
INFORMATION SOURCE			
Null	0	1.39	1.39
Friends/ Relatives	41.38	50.00	8.62
TV	44.83	52.78	7.95
Magazine	65.52	66.67	1.15
Travel Agent	86.21	90.28	4.07
Other	100.00	100.00	0

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

FORMULA:
$$\frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

SEX :

$$= \frac{4 (.1341 \times .1341) \times (2088)}{101}$$

= 1.487

AGE:

$$= \frac{4 (.1767 \times .1767) \times (2088)}{101}$$

= 2.581

MARITAL:
STATUS

$$= \frac{4 (0.1767 \times .1767) \times (2088)}{101}$$

= 2.581

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

FORMULA:
$$\frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

EDUCATION :
$$\frac{4 (0.0393 \times 0.0393) \times (2059)}{100}$$

= 0.127

ANNUAL TOTAL
INCOME:
$$\frac{4 (.1813 \times .1813) \times (2088)}{99}$$

= 0.82

INFORMATION:
SOURCE
$$\frac{4 (.0862 \times .0862) \times (2088)}{101}$$

= 0.6144

FACTOR 4 (PLEASURE SEEKER)

CATERGORY	HEAVY	LIGHT	DIFFERENCE
SEX			
Male	55.00	37.04	17.96
Female	100	100	0
AGE			
Under 21	5.00	8.64	3.64
22 - 30	40.45	43.21	3.21
31 - 40	95.00	85.19	9.81
40 Over	100.00	100.00	0
MARITAL STATUS			
Single	25.00	32.10	7.10
Married	90.00	86.42	3.58
Married/Children	100.00	100.00	0
EDUCATION			
Secondary	45.00	46.25	1.25
Tertiary	90.00	86.25	3.75
Voc/Tech.	90.00	88.75	1.25
Other	100.00	100.00	0
ANNUAL TOTAL INCOME			
Below \$15,000	0.00	20.25	20.25
\$15,000 - \$25,000	35.00	41.77	6.77
\$25,000 - \$35,000	65.00	63.29	1.71
\$36,000 Over	100.00	100.00	0

FACTOR 4 (PLEASURE SEEKER)

CATERGORY	HEAVY	LIGHT	DIFFERENCE
INFORMATION SOURCE			
0	0	1.23	1.23
Friends/ Relatives	35.00	50.61	15.61
TV	45.00	51.84	6.84
Magazine	55.00	69.12	14.12
Travel Agent	85.10	90.11	5.11
Other	100.00	100.00	0

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

$$\text{FORMULA: } \frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

$$\begin{aligned} \text{SEX : } & 4 (.1796 \times .1796) \times (1620) \\ = & \frac{}{101} \\ = & 2.06 \end{aligned}$$

$$\begin{aligned} \text{AGE:} & \\ = & \frac{4 (.0981 \times .0981) \times (1620)}{101} \\ = & 0.6174 \end{aligned}$$

$$\begin{aligned} \text{MARITAL:} & \\ \text{STATUS} & \\ = & \frac{4 (0.0710 \times 0.0710) \times (1620)}{101} \\ = & 0.323 \end{aligned}$$

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

FORMULA:
$$\frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

EDUCATION :
$$\frac{4 (0.0375 \times 0.0375) \times (1600)}{100}$$

= 0.090

ANNUAL TOTAL
INCOME:
$$\frac{4 (.2025 \times .2025) \times (1580)}{99}$$

= 2.6177

INFORMATION:
SOURCE
$$\frac{4 (.1561 \times .1561) \times (1620)}{101}$$

= 1.563

FACTOR 5 (SOPHISTICATE SEEKER)

CATERGORY	HEAVY	LIGHT	DIFFERENCE
SEX			
Male	57.69	34.67	23.02
Female	100	100	0
AGE			
Under 21	7.69	8.00	0.31
22 - 30	42.31	42.67	0.36
31 - 40	92.31	85.34	6.97
40 Over	100.00	100.00	0
MARITAL STATUS			
Single	26.92	32.00	5.08
Married	84.61	88.00	3.39
Married/Children	100.00	100.00	0
EDUCATION			
Secondary	38.46	48.65	10.19
Tertiary	84.61	87.84	3.23
Voc/Tech.	88.46	89.19	0.73
Other	100.00	100.00	0
ANNUAL TOTAL INCOME			
Below \$15,000	11.54	17.81	6.27
\$15,000 - \$25,000	46.16	38.36	7.80
\$25,000 - \$35,000	61.54	64.39	2.85
\$36,000 Over	100.00	100.00	0

FACTOR 5 (SOPHISTICATE SEEKER)

CATERGORY	HEAVY	LIGHT	DIFFERENCE
INFORMATION SOURCE			
Null	3.85	0.00	3.85
Friends/ Relatives	50.00	46.67	3.85
TV	57.69	48.00	9.69
Magazine	80.77	61.33	19.44
Travel Agent	96.15	86.66	9.49
Other	100.00	100.00	0

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

$$\text{FORMULA: } \frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

$$\begin{aligned} \text{SEX : } & 4 (.2302 \times .2302) \times (1950) \\ = & \frac{\quad \quad \quad}{101} \\ = & 4.092 \end{aligned}$$

$$\begin{aligned} \text{AGE: } & 4 (.0697 \times .0697) \times (1950) \\ = & \frac{\quad \quad \quad}{101} \\ = & 0.375 \end{aligned}$$

$$\begin{aligned} \text{MARITAL:} \\ \text{STATUS} & = 4 (0.0595 \times 0.0595) \times (1144) \\ & \frac{\quad \quad \quad}{101} \\ & = 0.1605 \\ & = 0.16 \end{aligned}$$

MANUAL CALCULATION OF KOLMOGOROV SMIRNOV TESTING SAMPLE

$$\text{FORMULA: } \frac{4D^2 \times (N1 \times N2)}{(N1 + N2)}$$

EDUCATION : 4 (0.1019 X 0.1019) X (1924)

 100

= 0.799

ANNUAL TOTAL
INCOME:

 4 (.0780 X .0780) X (1898)

= -----

 99

= 0.4666

INFORMATION:
SOURCE

 4 (.1944 X .1944) X (1950)

 101

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