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TOURIST MOTIVATION IN HIGHLAND DESTINATION: CASE STUDEY IN PENANG HILL, MALAYSIA

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This research was conducted to investigate the factors that motivate tourist to visit highland destination as well as to study the relationship between socio-demographic factor and travelling characteristics found in the tourist motivations to visit highland destinations. The accomplishment of this research was achieved through the accumulation of empirical data at Penang Hill, Malaysia using complete set of questionnaires. By using the principal component analysis, this study has identified three push and pull factors. The three push factors are "escape factor "; "to rest and build closer bond factor; "prestige and safety factor". The pull factors that can be identified are "the beauty of nature factors";"infrastructure of the city and George Town factor" and "management and safety factor". Furthermore, the results of multiple regression analysis performed show that the manipulated variables (socio-demographic and travel characteristics) have influenced the tourist motivation in highland destinations.

Keywords: Tourists Motivation, Socio-Demographic, Travel Characteristic, Multiple Regression Analysis, Highlands Destination Tourism, Penang Hill

JEL Classification: *L83, M1, O1*

INTRODUCTION

The demand of the tourism industry is the output of tourist motivation supported by the marketing, destination features, contingency factor such as health, time and money (Pearce & Butler, 1993). According to Crompton (1979), Cha, McCleary, & Uysal (1995), Yoon & Uysal (2005), "tourist motivation" is one of the approaches to understand the

needs and behaviors of the tourist. Tourist motivation is an important indicator in the research development of tourism industry. It is the major medium that will influence the decision and choice of the tourists to travel (Wearing & Neil, 1999). Yousefi (2011) noted that a high level of understanding towards the tourist motivation is the main key for tourism product marketing success. Therefore, tourist motivation plays an important role in designing and planning of the tourism product marketing. The objectives of this research are 1) to investigate the motivations of tourists in the highlands and 2) to investigate the relationship between socio-demographic factors and motivations of the tourists visiting highland tourism destinations.

LITERATURE REVIEW

According to Dann (1981), tourist's motivation draws back to the question – "Why does someone travel?". There are many discoveries that have been found to answer the question above such as to escape from the daily routine and its support from some academic research related tourist motivation. (Beh & Bruyere; 2008; Moscardo, Morrison, Pearce, Lang & O'Leary,1996; Yuan & McDonald; 1990)

There are also some researchers who are using the Maslow's hierarchy of needs Model in describing the tourist motivation. This model explains the biological and psychological needs, safety needs, love or belonging needs, esteem needs and self-actualization needs(Hsu & Huang,2008). Maslow(1948)(cited by Hsu & Huang,2008) suggests that the most basic level of needs must be met before the individual will strongly desire for the secondary or higher level of needs. Pearce (1982) applied this theory in socio-logical study of tourists and disagreed that the tourists travelled only to fulfill their psychological and biological needs, safety, love, self-satisfaction and self improvement. But they also need to consider the aspects of avoidance in motivational research which put safety as the main feature.

Based on the research conducted, Pearce (1988) built the Travel Career Ladder Model. The model explained the needs and tourist motivation arranged in the form of a ladder. Relaxation factor is a basic factor and at the lowest level in the theory, followed by a safety factor, relationships, self-esteem and fulfillment (Pearce, 1988). Ryan (1998) argues that this model based on Maslow's hierarchy of needs and the needs of tourists showed psychological maturity to achieve the goals toward self-actualization. It can be showed as a mature psychological or good health.

Apart from the Travel Career Ladder Model, Scale "Leisure" Motivation Model was also designed and built based on the model of Maslow's Needs (Beard & Ragheb,1980; Ragheb & Beard,1982; Beard & Ragheb 1983). Within this model, Ragheb & Beard (1982) stated that there are four factors that influenced the tourists' motivation; they are intellectual, social, competence-mastery and stimulus-avoidance factor; assessed through three components of the cognitive component, affective component and behavioral component. Ryan & Glendon (1998) in their study of British travelers found that, generally, most respondents tend to lean towards stimulus-avoidance factor compared to other factors in this theory.

Although several of motivational theories are being presented, push and pull theory is often used by researchers in tourist motivation studies (Dann, 1977; Dann, 1981; Crampton; 1979; Cha, McCleary & Uysal, 1995; Wang, 2004; Kim, Lee & Klenosky, 2003; Yuan & McDonald, 1990; Oh, Uysal, & Weaver, 1995). Based on the previous research, push factors refer to the psychological the aspects of internal factors that motivate someone to travel (Yoon & Uysal, 1995; Crampton, 1979). Among the push factors which often discovered by researchers are novelty, escape from daily routine, relaxation, social and others. Dann (1977) cited the concept of anomie and ego-enhancement. Anomie to the situation perceived by tourists which felt like meaningless and normlessness in life and surroundings.

Meanwhile ego-enhancement signifies a level of personality needs. Ego-enhancement is usually associated by lack of relative status by the individual within the environment. Vacation to tourism destinations is seen as one way to overcome it and as an opportunity to improve their self-confidence. Apart from the push factors (sociological factor), pull factors also play an important role in the understanding of tourists' motivation. Pull factors referred to features available in the tourism destinations (Dann, 1981; Crampton; 1979; Cha, McCleary & Uysal, 1995; Wang, 2004; Kim, Lee & Klenosky, 2003; Yuan & McDonald, 1990; Oh, Uysal, & Weaver, 1995).

The pull factor refer to the surroundings of the tourism destinations such as the natural form of the landscape and environment, the community and the culture of local customs, local hospitality, services such as accommodation, transport, security, as well as the costs and expenses necessarily to be incurred by tourists (Kozak & Rimmington, 2009; Kim, 1998). Kim, Lee & Klenosky (2003) remarked that the natural attractions, comfortable facilities, information preparation about the

tourism destination as well as accessibility and transportation are important attraction factor at 6 national parks in South Korea.

Socio-demographic is an essential element and is often tested in previous research (Jang & Wu, 2006; Woo, Yolal, Cetinel & Uysal, 2011; Wang, 2004; Kim, Borges & Chon, 2006; Kim, Lee & Klenosky, 2003). Jang & Wu (2006) stated that demographic factors such as age, gender and economic status are the important element to understand the behavior and tourist motivation. However relationship of travel characteristics towards the study of motivation is still not widely studied particularly at the highland tourism destination.

Highland Tourists' Motivation

Table 1 below shows a research on tourist motivation in highland destinations with an altitude of 300 meters above sea level (Ko" rner, et al., 2005).

Push factors at Highland Tourism Destination

Based on previous research carried out on the highland tourism destination, the social factor is often used in tourist motivation research in the area whether in the form of human interaction as well as the desire to enjoy and have fun with the tourism product available. The factors such as the desire to be with family, to create closer bond (*silaturahim*), sense of belonging, togetherness and socialization were the factors often found in previous research.

Undoubtedly, the average tourist preferred a tourism destination that offers social attraction. Studies organized by Woo, Yolal, Cetinel, and Uysal (2011) proved that socialization factor (for example, to have fun with people of similar interests) was the main motivation for tourists who visit the International Festival of Eskisehir, Turkey. Similarly, the study conducted by Kim, Borges, and Chon (2006), also showed that being with family and socializing, is the main element that triggers the tourist motivation in making choices. Meanwhile, other studies directed by Budruk, White, Wodrich, & Riper (2008), Pan & Ryan (2007), Money (2004) and Schofield & Thompson (2007) also listed the social factor as the push factors that motivate tourists to visit tourism destination.

Table 1. Previous Research in Highland Destination

Researcher	Research location and the elevation from the sea level (m)	Tourists' Profile	Push Factor (Socio-Psychological)	Pull Factor (Destination Attribute)
Wang (2004)	Huangshan Mountain (1864 m)	Majority: Male, 25-64 years old, at least have a secondary school education, come by group, earning more than 1000 yuan.	for relaxation and health, to appreciate the beauty of nature and to gain knowledge, to create closer relationship, prestige, novelty and challenge	high quality tourism resources, comfortable tourism area, easier access to information and convenient facilities, management and tourism area
Poria, Butler & Airey (2004)	Jurussalem(754 m)	The majority of the respondents were men between 20-29 years old. Those who visited the Wailing Wall and Massada is Christian	To gain experience on heritage / emotional, recreational and cultural / educational	
Kim, Borges & Chon (2006)	Goias, Brazil (626.4 m)	Majority: Male, under 37 years old, at least high school educated, earning less than R $ 4,800, travel in a group (more than 4 people)	to spend time with family, socialization, to escape the daily busy routine	tourist (Goias) and festival attractions
Pan & Ryan (2007)	Pirongia Forest Park (959 m)	Majority: Male, between 21-40 years old, works in the managerial and professional, and has a tertiary education.	Relaxation, social, sense of belonging, expertise and intellectual	Infrastructure and Nature

Schofield & Thompson (2007)	Ulaanbaatar, Mongolia, (1301.5 m)	Majority: men, aged below 34 years old, Mongolia community	for cultural exploration, "togetherness" socialization	sports activities attractions and special events of local culture
Budruk, White, Wodrich & Riper (2008)	Canyon de Chelly National Monument, Arizona (1696.8 m)	Majority: Male and have at least has a third level of education. Average age of the tourist are 51.98 years	to enjoy nature, to gain knowledge, to be with family, introspection	Navajo cultural identity and place
Beh & Bruyere (2008)	Kenya National Reserves- Samburu National Reserve, Buffalo Springs National Reserve and Shaba National Reserve (762-1,219 metres)	Average age of 41 years, the majority of tertiary educated (bachelor degree) and originated from European countries	to escape from the daily routine, to learn the local culture, to build strong character, to gain knowledge, to seek challenges	mega-fauna, "general viewing"
Woo, Yolal, Cetinel & Uysal(2011)	Eskisehir, Turki (794.6 m)	Majority: Female; single, at least has tertiary education (college), under 30 years old	Socialization, fun, to escape, to be with family	novelty events
Litte & Needham (2011)	Mt. Bachelor ski area , Oregon (1935 m- 2763 m)	The majority of respondents are males and the average age of the respondents are 39.8 years old		VEP and nature, food and service, lifts and trails, natural beauty, access to the mountain, advertising and events for young people; lift access and price.

Other than that, gaining knowledge factor is one of the motivations that often tested in the tourist motivation research in highland tourism destination. Learning the culture and customs of the locals as well as

appreciating the beauty of nature was the one that triggers the tourist motivation to travel to the highland region.

As Schofield and Thompson (2007) had worked on, the main tourist motivation to go to Nadaam Festival in Ulaanbaatar, Mongolia is to explore the local culture. The reason behind the tourists' visitation to Nadaam Festival was triggered by the desire to learn, explore and to experience the Mongolian culture, similar with the tourists who visited the Canyon de Chelly National Monument, Arizona (Budruk, White, Wodrich, & Riper, 2008). The tourists who visited the Canyon de Chelly National Monument were motivated to improve their knowledge of history, archeology studies and to pursue and enjoy the culture of Navajo. Wang (2004) discovered that the motivation of the tourists in visiting Mount Huangshan in China is to improve their knowledge of the tourism destinations. This is because Mount Huangshan is one of the world heritage area designated by UNESCO in terms of culture and the beauty of nature. The motivations mentioned are the triggering nudge that influenced tourists to visit the respective destinations.

The idea of escapade from the daily routine and relaxation were also among one of the tourist motivations to visit the highland tourism destinations. Pan and Ryan (2007) stated that most of the tourists who visited the Pirongia Forest Park travelled to the area to relax and calm their mind down. They were motivated to enjoy the fresh air, to escape from the daily routine, to relax and to build an effective mind. Similar to the study conducted by Wang (2004), it had been proven that the main push factors for tourists who choose to visit Mount Huangshan in China are especially intended for relaxation and health.

Pull Factor (Destination Attributes)

The uniqueness and specialty of the tourism destination is the major attraction for tourists to travel. For example, the Wailing Wall became the preferred choice for the Jewish and Christian religious rituals. Therefore, most of the respondents preferred to visit a place due to its high sense of belonging towards that place (Poria, Butler, & Airey, 2004).

Besides that, the uniqueness of the Canyon de Chelly National Monument is part of pull factor for tourists to visit (Budruk, White, Wodrich, & Riper, 2008). The destination is complete with an attractive features of a unique monument, archaeological and cultural features that have made this a preferred destination for the tourists. Respondents also

felt that their visit to Canyon de Chelly National Monument had left deep meaning and clear trace in their heart.

Comparable with the study conducted by Kim, Borges, and Chon (2006) which depicted that the attraction within the tourism area and festivals were the main factor to visit International Festival of Environmental Film and Video (FICA) Festival in Brazil. Other than the attractive input from the FICA festivals, the tourists also think it was a great opportunity to visit Goias which is a World Heritage Site accredited by UNESCO based on its cultural elements.

However, it is undeniable that the uniqueness of nature environment should be accounted as the main attractions in tourism destination. It can be proven by the research conducted by Wang (2004); that the beauty of the nature is the main attraction for the tourist to visit Mount Huangshan. In addition, there are other pull factors at the tourism destination which include comfortable environment, good access to relevant information about the tourism destinations, comfortable facilities and proper management as well as good services. Homogenously, the study conducted by Little and Needham (2011) specified that the beauty of nature and the surroundings of Mount Bachelor is a major tourism attraction for the tourists to visit.

Beh and Bruyere (2008) reported that the main factor which attracts tourists to the Reserve National Park in Kenya is due to the diversity of flora and fauna. Semburu National Reserve, Buffalo Spring National Reserve and Shaba National Reserve are rich with unique wildlife such as *Somali Ostrich*, *Beisa Oxryx* and *Gernuk*.

Apart from the unique factors, the infrastructure factor also contributed in drawing the tourists' attention to visit the tourism destination. Infrastructural facilities such as road signs, adequate parking space, clean toilet and good condition of hiking trails and safe from the wildlife are an ultimate attraction of Prongua Forest Park in New Zealand. It is similar with the research carried out by Little and Needham (2011), which proved that the infrastructure facilities like lifts service and trails to the ski area as well as the mountain and the beauty of nature are the factors that attract the tourist to visit Mount Bachelor in Oregon.

Socio-demographic and travel characteristic relationship towards the Push and Pull Factor at Highland tourism destination.

A majority of previous researches focused on the relationship between the socio-demographic of the tourist and the tourist motivation.

However, the relationship between the travel characteristics and the tourist motivation is still lacking especially in highland tourism destinations. Travel characteristic research was generally conducted by Kim, Borges & Chon (2006) but a detailed analysis of significant travel characteristic relationship was under-utilized.

However, the socio-demographic relationship factor among tourist motivation was often resolved by researchers by studying the relationship of socio-demographic and motivational factors. Based on the highland tourist motivation research, the socio-demographic factors have influenced the push factor to travel to the highland tourism destinations. In a study performed by Woo, Yolal, Cetinel, and Uysal (2011) showed that the tourists that visited the rock performance (2.827) have low motivation factors against the factors of "being together with the family" compared to the the tourists who choose other tourism products offered at the International Festival in Eskisehir, Turkey [symphony (3.726), world music (3.390), dance (3.609), ballet (3.572) and theater (3.519)]. This is due to 52 percent of the tourists who visited the rock show comes from the age group under 23 years old compared to tourists visited other tourism products in which the majority is of 23 years old and above.

Apart from that, the tourist statistics in Eskiseher International Festival, tourists who visited the FICA (International Festival of Environmental Film and Video), Brazil also proved that socio-demographic factors influenced tourist motivation to go to the festival. Younger age group (under 37 years) are more motivated towards the factor of ‘escaping the daily routine’ compared to the older age group (38-47 years). The study also showed that the middle age groups are more motivated towards the gist of the festival than the younger age groups.

This matter is proven in a study conducted by Wang (2004), which confirms that the tourists under the age of 24 years are more motivated towards the factor of "novelty", "seeking challenges", “to appreciate the nature” and “to gain knowledge” compared to those in the age group of 24 years old and above.

Wang (2004) noted in the research that the age groups below 15 years old are more motivated to seek information on the facilities and services of the comfortable facilities than the age group 15 years and above. In addition, the age groups of 45-64 years old are more motivated towards management and services at Mount Huangshan than the other age groups.

RESEARCH METHODOLOGY

Field Location Area

Primary data collection was done at Penang Hill. It is located at the Air Itam in Penang Northeast District. In terms of geography, Penang Hill is located 823 meters above sea level and has an average temperature of 20 º C-27 º C.

Data Collection

The field study was done on 3rd May 2012 until 6th May 2012 at the Upper Station Penang Hill Railway. The Upper Station Penang Hill Railway has been selected as the center for distribution of the questionnaires because it is a major transit for the tourists to return to the foothill after visiting the hill.

A total of 400 sets of questionnaires were distributed to the tourists. Overall, 300 sets of questionnaires were distributed to local tourists and 100 sets of questionnaires to foreign tourists. The questionnaire's distribution was based on a tourists' statistic who visited Penang Hill issued by the Penang Hill Corporation.

In this study, respondents were given the opportunity to return the questionnaire directly to the researcher during the field research or via email afterwards, as stated in the questionnaire within a specified time. Overall, the response for this research was 55.75 percent, or about 223 sets of questionnaires were fully collected. The response of foreign tourists is higher by 65 percent (65 respondents) than the local tourists at 52.67 per cent (158 respondents) based on the number of questionnaires that were carried out.

Data Instruments

The questionnaire was designed based on the tourist motivation research in highland tourism destination and the features that are available at Penang Hill. The questions in the survey are divided into 4 sections – they are socio-demographic, characteristics of the trip, tourists' motivation (push factors) and tourism destination attraction (pull factors). The purpose of the first and second section (socio-demographic and characteristics of the trip) was to provide the second objective of the study while the third and fourth section were prepared to identify the push and pull factors of the tourists to travel to the highland tourism destinations. In

this section, 26 push and pull factors are provided. These sections are assessed through Likert scale (1-strongly disagree to 5-strongly agree).

RESULTS

Analysis of Socio-Demographic and Travel

Table 2 showed a summary derived from the socio-demographic analysis. Generally, most of the tourists who visited Penang Hill consist of local citizens (70.9%), male (57%), aged between 21 to 30 years old (48.4%), students (34.10%), people who received information of the tourism destinations through family and friends (33.20), and the purpose of the visit was 'on vacation' (86.10%) and 'travelling with friends' (44.40%).

Table 2. Socio-Demography Analysis in Penang Hill

Variable	Frequency	Percentage
Socio-demography factors		
Gender		
Male	127.00	57.00
Female	96.00	43.00
Age		
20 years old and below	31.00	13.90
21-30 years old	108.00	48.40
31-40 years old	31.00	13.90
Variable	**Frequency**	**Percentage**
41-50 years old	18.00	8.10
51-60 years old	20.00	9.00
60 years old and above	15.00	6.70
Variable	**Frequency**	**Percentage**
Occupation		
Self-employed/owns business	28.00	12.60
Civil servants	31.00	13.90
Housewife	9.00	4.00
Student	76.00	34.10
Professional	32.00	14.30
Management	18.00	8.10
Retirees	13.00	5.80

Others	16.00	7.20
Nationality		
Malaysian	158.00	70.90
Non-Malaysian	65.00	29.10
Travel Characteristic		
Destination information Source		
Newspapers	10.00	4.50
Television	22.00	9.90
Internet	46.00	20.60
Family and friends	74.00	33.20
Past experience	45.00	20.20
Tourism agency	12.00	5.40
Others	14.00	6.30
Purpose of visit		
Business	2.00	0.90
Holiday	192.00	86.10
Others	29.00	13.00
Group type		
Alone	17.00	7.60
Family	80.00	35.90
Friends	99.00	44.40
Others	27.00	12.10

Factor Analysis

In this analysis, 12 push motivations and 12 pull motivations are analyzed using factor analysis in which the application of the varimax rotation procedure is to examine the push and pull factors affecting the choice the highland destination's tourists, took place. The first criterion involved in this analysis being issued was when the eigenvalue factor exceeded more than 1.0. The second selection of criteria for every motivation should exceed 0.4 onwards. The majority of statistical set that 0.4 is the minimum value for a variable to be acceptable in the analysis (Hair, Black, Babin & Anderson, 2006; Pallant, 2007; Field, 2009). In addition, the push and pull factors will also be analyzed using the analysis of reliability by using the Cronbach Alpha value. In the research, the minimum value for an acceptable reliability analysis is 0.7 but for exploratory research, the minimum value is 0.6. (Hair et al, 2006).

Push Factor

Based on the factor analysis performed, 3 factors were extracted from 12 push motivation. The factor analysis of push motivation is shown in Table 3.

Table 3. Push Factor

Push factors (socio-psychological) with variables	Factor Loading	Communality	Eigen values	Varian (percent)	Cronbach Alpha
1. Rest and to create closer bond			**4.872**	**40.600**	**0.786**
Can refresh the mind and be inspired	0.622	0.777			
To get a break physically and mentally.	0.613	0.601			
To spend time with someone special.	0.619	0.400			
To build close bonds with family and friends.	0.775	0.735			
Being able to do activities together with family and.	0.678	0.578			
2. Prestige and safety			**1.568**	**13.064**	**0.802**
Visit a tourism destination that never visited by friends.	0.758	0.578			
Dreaming to visit this place.	0.710	0.618			
To visit a place where family and friends. wish to visit.	0.780	0.669			
visit a destination that will attract the attention of your friends and family.	0.694	0.659			
the place that safe and secure.	0.501	0.482			
3. Escape			**1.012**	**8.436**	**0.636**
to escape the daily routine	0.807	0.672			
to release work stress	0.781	0.693			
Cumulative variance (percent): 62.10					

Rest and to create closer bond is the most dominant factor and it possesses more variances of 40 600 from 62 100 per cent of motivation factors with factor loading over 0613. This factor consists of 5 push motivations: "To refresh the mind and be inspired" (0.622): "To get a break physically and mentally" (0.613): "To spend time with someone special" (0.619): "To build close bonds with family and friends "(0.775):"

Being able to do activities together with family and friends "(0.678). The reliability analysis for these factors are 0.786.

Meanwhile, the second factor that influenced the respondents to go to Penang Hill is the safe and prestige factor. This factor accumulated the variance over 13 064 from 62 100 per cent with every motivation of factor loading more than 0.501. This factor has 5 push motivations: "Visit a tourism destination that never visited by friends" (0.758): "Dreaming to visit this place" (0.710): "To visit a place which family and friends wish to visit" (0.780); "visit a destination that will attract the attention of your friends and family" (0694): "the place that safe and secure" (0.501). The reliability analysis for this factor is 0.802.

The last factor is escape which had a variance of 8.436 per cent from 62.10 per cent with every motivation of a factor loading of more than 0.781. There were 2mmotivation factors which are: "To escape the daily routine" (0.807) and To release work stress (0.781). The reliability analysis of this factor is 0.636.

Pull Factor

From over 12 pull motivations that were analyzed through analysis factor, only three factors were extracted as shown in Table 4.

Management and safety factors have variances of 42 018 per cent from 67.31 per cent with every motivation of a factor loading of more than 0611. This factor has 5 of motivation: "good supporting facilities (eg: toilets, food outlets and mosque etc)" (0.797); “efficient management and service" (0.884): "great quality of service and hospitality from the Penang Hill management "(0.796):" safe environment "(0.611);" good tourist information center "(0.687);" cheap Penang Hill funicular railway ticket prices "(0.672) Analysis of the reliability of this factor is 0.861.

The beauty of the nature factors have variants over 16.312 per cent from 67.31 per cent with every motivation of a factor loading of more than 0.836. There were 3 motivation factors which consist of: "To observe the beauty of the nature" (0.758): "To get closer to the nature" (0.710): "To enjoy the fresh air" (0.780). The reliability analysis of this factor was 0.869.

The last factor is the infrastructure and George Town which had a variance of 8.986 per cent from 67.31 per cent with every motivation of a factor loading of more than 0.563. There were 3 motivation factors which are: "To see the view of George Town" (0784): "To experience riding Penang Hill train" (0.782); "Good public transportation facilities" (0.563). The reliability analysis of this factor is 0.678.

Table 4. Pull Factor

Pull factors with variables	Factor weightage	Commonality	Eigen values	Varian (percent)	Cronbach Alpha
1: Management and safety			**5.042**	**42.018**	**0.861**
Good supporting facilities (for example: toilets, Muslim prayer room, eating places and etc.)	0.797	0.734			
Efficient management and services.	0.884	0.819			
great quality of service and hospitality from the Penang Hill management.	0.796	0.666			
Safe environment.	0.611	0.640			
good tourist information center	0.687	0.562			
Cheap Penang Hill funicular railway ticket.	0.672	0.469			
2. Natural beauty			**1.957**	**16.312**	**0.869**
To observe the beauty of nature.	0.841	0.772			
To get closer to the nature	0.852	0.795			
To enjoy the fresh air	0.836	0.758			
3. Infrastructure and the city of George Town			**1.078**	**8.986**	**0.678**
To see the view of George Town	0.784	0.689			
To experience riding Penang Hill train	0.782	0.683			
Good public transportation facilities	0.563	0.490			
Cumulative variance (percent): 67.31					

Multiple Regression Analysis: Socio-Demography, Travel Characteristic and Tourist Motivation

One of the objectives of this research is to observe the significance of the socio-demographic factors and the travel characteristic of the tourists' motivation. Motivation factors derived from the factor analysis, will go through regression analysis in evaluating and significant relationship between socio-demographic factors and tourist motivation as Jang & Wu (2006) and Jang & Cai (2002) worked on. In this regression analysis,

multiple regression analysis will be performed. Hair, Black, Babin & Anderson (2006) and Field (2009) stated that the relationship between the manipulated variable and responding variable is based on the following equation:

$$Y' = \text{Intercept} + B_1X_1 + B_2X_2 + \ldots BnXn+\varepsilon$$

Y': Responding Variable value
A: Intercept
B: Regrssion coefficient value
X: Manipulated Variable value
ε: residual

So, the regression model for this analysis is:

Motivation Factor: $A+B_1\text{Gender}+ B_2\text{Age} + B_3\text{Occupation} + B_4\text{Nationality} + B_5\text{Tourism information} + \text{Visiting purposes} + B_8\text{Type of Group} + \varepsilon$

Before the regression analysis evaluating process was conducted, the multicollinearity should be taken into account. To assess multicollinearity, the tolerance should be considered. "Tolerance" was the sum of independent indicator of variability which is not explained by other manipulated variables in the model and it was calculated using the formula 1-R2 for each variable (Hair et al, 2006; Pallant, 2007). Pallant (2007) suggested that a minimum value for the "Tolerance" is not less than 12:10 but Pan & Ryan (2007) uses 0.5 as the minimum value of "Tolerance" in his research. Tolerance minimum value of this research is 0.820 and the maximum value is 0.989. Tables 5 and 6 show how the multiple regressions analysis was done.

Overall, the 3 push factors and 3 pull factors model has been formed as shown in Table 5 and Table 6. Based on the analysis, only the prestige and safe factor model as well as the beauty of nature model have significant number at 0.05. Based on the analysis performed, the value of R in this study was low at 0.122 compared to research done by Jang & Wu (2006) in about 0.275. From the analysis, there are socio-demographic factors and travel characteristic factors which are significant by the same motivational factors. The factors of gender and travel purposes are significant towards the escape factor whereas, age and travel information factor are significant towards the city and the infrastructure of Georgetown factor. This analysis shows that the relationship between

socio-demographic and characteristic factor towards tourist motivation factors is either push or pull motivation

Table 5. Regression analysis for push factor

	Rest and strengthening ties		**Prestige and safety**		**Escape**		**Tolerance**
	Unstandardized Coefficient		**Unstandardized Coefficient**		**Unstandardized Coefficient**		
	B	**Std Error**	**B**	**Std Error**	**B**	**Std Error**	
(Constant)	4.782	1.725	6.37	1.893	2.139	0.811	
Gender	-0.231	0.268	-0.028	0.294	-0.22	0.126	0.989
Age	-0.009	0.169	-0.165	0.185	0.086	0.079	0.82
Occupation	0.188	0.113	0.35	0.124	0.09	0.053	0.935
Nationality	1.922	0.522	0.94	0.573	0.379	0.246	0.824
Destination information Source	-0.137	0.155	-0.102	0.171	0.023	0.073	0.969
Purpose of visit	0.807	0.602	1.668	0.66	0.837	0.283	0.917
Group type	0.275	0.287	-0.227	0.315	-0.24	0.135	0.86
F Value	3.451		2.574		3.468		
R^2	0.101		0.077		0.101		
Significant	0.002		0.014		0.002		

Table 6. Regression Analysis for Pull Factor

	Management and safety		Natural beauty		Infrastructure and the city of George Town		Tolerance
	Unstandardized Coeeficient		Unstandardized Coeeficient		Unstandardized Coeeficient		
	B	Std Error	B	Std Error	B	Std Error	
(Constant)	9.994	2.135	1.711	0.968	5.02	1.125	
Gender	-0.294	0.332	0.102	0.151	-0.179	0.175	0.989
Age	-0.075	0.209	-0.052	0.095	-0.241	0.11	0.82
Occupation	0.437	0.14	0.097	0.064	0.136	0.074	0.935
Nationality	2.267	0.647	0.686	0.293	1.254	0.341	0.824
Destination information Source	-0.28	0.192	-0.065	0.087	-0.167	0.101	0.969
Purpose of visit	0.079	0.745	0.533	0.338	0.411	0.392	0.917
Group type	-0.014	0.355	0.325	0.161	-0.205	0.187	0.86
F Value	4.282		2.494		3.62		
R^2	0.122		0.075		0.105		
Significant	0.00		0.018		0.001		

CONCLUSION

In this study, 3 push and pull factors have been identified. Push factors consist of escape factor, rest and to build closer bonds and also prestige and safe factor. Rest and to build closer bonds factor is the major factor that motivates the tourists to visit Penang Hill. The motivations found in this factor are "to relax your mind and get inspired"; "to be physically and mentally relaxed"; "to spend time with someone special","to build strong bonds with friends and family";"planning activities together with friends and family ". The research findings are parallel with the research that have been done at the highlands tourism

destinations; (Kim, Borges & Chan, 2006; Schofield & Thompson, 2007; Woo, Yolal, Cetinel & Uysal, 2011; Wang, 2004) stated that their research findings in are the factors found in this research. In fact, this research was also similar to the study done by Kim, Borges & Chan (2006) which stated that the main factor encouraging the tourists to visit the FICA festival at Gaouis in Brazil was to build closer relationship with other people. The findings are also parallel with the studies conducted by Wang (2004) that stated the main push factors that motivate tourists to visit Huangshan Mountain is to rest and relax.

Meanwhile, in pull factors there were three factors that have been identified which is the beauty of nature factors, the city infrastructure and management factors as well as the safety factors. Excellent management and safety factors are the key to attract the tourist to visit Penang hill. The motivation which affected these factors are the "safe environment", "good tourist information center", "good quality of service and treatment from Penang Hill management", " efficient service and management," "excellent supporting facilities (eg: toilets, food outlets and mosque etc.) and “affordable Penang Hill train ticket price”.

This finding is also parallel to the research conducted by Kim (1998), who stated that the cost includes the price of tourism products and services excluding the cost of travelling, accommodation and participation in the services provided are the factors to visit the tourism destinations. This finding is also similar with the research conducted by Wang (2004) in Mount Huangshan. In that research, he noted that the privileges and unique natural environment, efficient management and other factors were among the causes that motivate tourists to visit Mount Huangshan in China.

The second research objective of the research was to identify the relationship between tourists socio-demographic and travel characteristics towards the tourists’ motivation. The result of this research showed that socio-demographic and travel characteristics affect the tourist motivation when all the conducted regression models had a significant value less than 0.05.

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APPENDIX

Means, Standard Deviations, Skew and Kurtosis

Push Factor

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Escape	223	2.00	10.00	4.1480	1.57130	.645	.163	.511	.324
Rest and strengthening ties	223	5.00	21.00	9.5650	3.34153	.741	.163	.620	.324
Prestige and safety	223	5.00	25.00	11.0762	3.61908	.679	.163	1.045	.324
Valid N (listwise)	223								

Pull Factor

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Management and safety n	223	6.00	27.00	13.0897	4.18610	.357	.163	-.003	.324
Infrastructure and the city of George Town	223	3.00	15.00	5.9552	2.18466	.513	.163	.365	.324
Natural beauty i	223	3.00	12.00	4.7354	1.84951	.980	.163	.975	.324
Valid N (listwise)	223								

Independent Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Gender	223	1.00	2.00	1.4753	.80989	7.396	.163	85.635	.324
Age	223	1.00	6.00	2.6996	1.41560	1.016	.163	.043	.324
Occupation	223	1.00	8.00	4.0717	1.96919	.210	.163	-.544	.324

Nationality	223	1.00	2.00	1.2915	.45547	.924	.163	-1.157	.324
Destination information Source	223	1.00	7.00	3.9596	1.41204	.130	.163	-.029	.324
Purpose of visit	223	1.00	4.00	2.1300	.37506	1.923	.163	4.479	.324
Purpose of visit e	223	1.00	5.00	2.6233	.81196	-.023	.163	-.263	.324
Valid N (listwise)	223								

Multiple Regression Analysis
For Rest and strengthening ties

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.318[a]	.101	.072	3.21942	.101	3.451	7	215	.002	1.865

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Rest and strengthening Ties

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	250.397	7	35.771	3.451	.002[a]
	Residual	2228.410	215	10.365		
	Total	2478.807	222			

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Rest and strengthening Ties

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.782	1.725		2.773	.006		
	Gender	-.231	.268	-.056	-.860	.391	.989	1.011
	Age	-.009	.169	-.004	-.056	.956	.820	1.220
	Occupation	.188	.113	.111	1.661	.098	.935	1.069

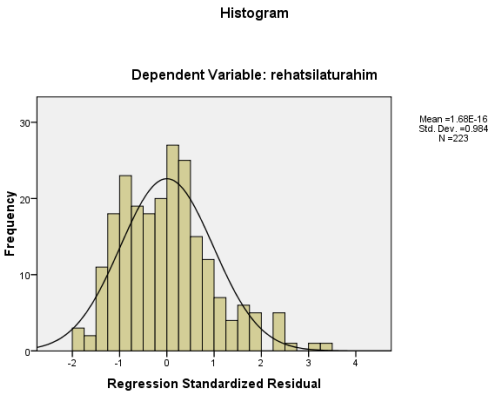
Nationality	1.922	.522	.262	3.679	.000	.824	1.213
Destination information Source	-.137	.155	-.058	-.880	.380	.969	1.032
Purpose of visit	.807	.602	.091	1.341	.181	.917	1.091
Group type	.275	.287	.067	.959	.339	.860	1.163

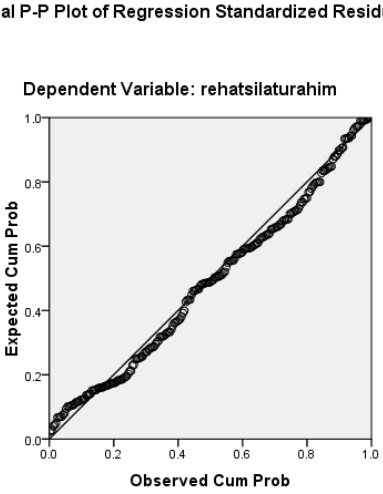
Dependent: Rest and strengthening Ties

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	6.5422	12.8587	9.5650	1.06203	223
Std. Predicted Value	-2.846	3.101	.000	1.000	223
Standard Error of Predicted Value	.318	2.575	.574	.205	223
Adjusted Predicted Value	6.4210	13.4821	9.5674	1.07609	223
Residual	-6.34603	11.21996	.00000	3.16826	223
Std. Residual	-1.971	3.485	.000	.984	223
Stud. Residual	-2.140	3.554	.000	1.003	223
Deleted Residual	-7.48206	11.66949	-.00238	3.28989	223
Stud. Deleted Residual	-2.158	3.655	.001	1.009	223
Mahal. Distance	1.174	140.983	6.969	9.935	223
Cook's Distance	.000	.103	.005	.011	223
Centered Leverage Value	.005	.635	.031	.045	223

a. Dependent Variable: Rest and strengthening Ties





Multiple Regression Analaysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.278[a]	.077	.047	3.53247	.077	2.574	7	215	.014	1.761

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Prestige and Safety

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	224.854	7	32.122	2.574	.014[a]
	Residual	2682.851	215	12.478		
	Total	2907.704	222			

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Prestige and Safety

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.370	1.893		3.366	.001		
	Gender	-.028	.294	-.006	-.096	.923	.989	1.011
	Age	-.165	.185	-.065	-.891	.374	.820	1.220
	Occupation	.350	.124	.190	2.809	.005	.935	1.069
	Nationality	.940	.573	.118	1.640	.103	.824	1.213
	Destination information Source	-.102	.171	-.040	-.596	.552	.969	1.032
	Purpose of visit	1.668	.660	.173	2.526	.012	.917	1.091
	Group type	-.227	.315	-.051	-.720	.473	.860	1.163

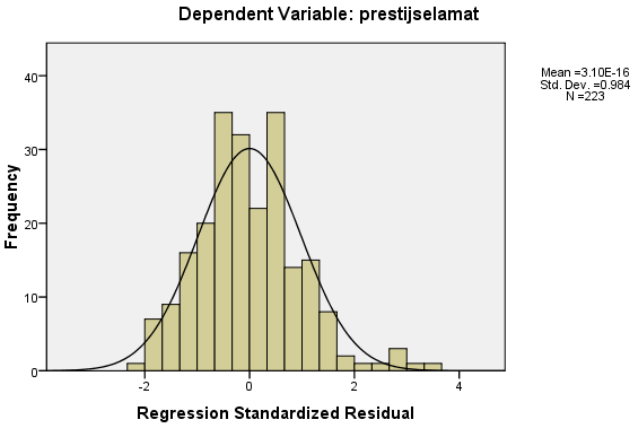
Dependent: Prestige and Safety

Residuals Statistics[a]

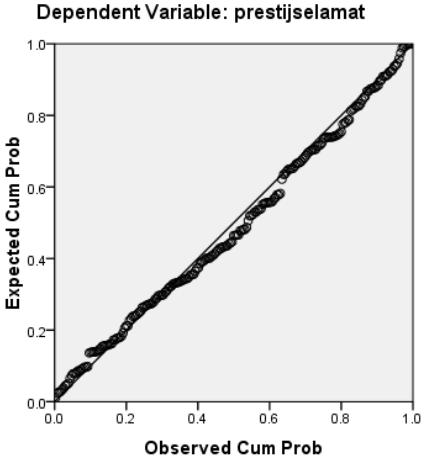
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	7.2809	14.3799	11.0762	1.00641	223
Std. Predicted Value	-3.771	3.283	.000	1.000	223
Standard Error of Predicted Value	.349	2.825	.630	.225	223
Adjusted Predicted Value	6.9739	14.4829	11.0846	1.02431	223
Residual	-8.03413	12.66930	.00000	3.47634	223
Std. Residual	-2.274	3.587	.000	.984	223
Stud. Residual	-2.337	3.658	.000	1.002	223
Deleted Residual	-8.48036	13.17690	-.00834	3.60515	223
Stud. Deleted Residual	-2.361	3.768	.001	1.009	223
Mahal. Distance	1.174	140.983	6.969	9.935	223
Cook's Distance	.000	.081	.005	.010	223
Centered Leverage Value	.005	.635	.031	.045	223

a. Dependent Variable: Prestige and Safety

Histogram



Normal P-P Plot of Regression Standardized Residual



Multiple Regression Analysis: Escape

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.319[a]	.101	.072	1.51352	.101	3.468	7	215	.002	2.056

a a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Escape

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.604	7	7.943	3.468	.002[a]
	Residual	492.513	215	2.291		
	Total	548.117	222			

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Escape

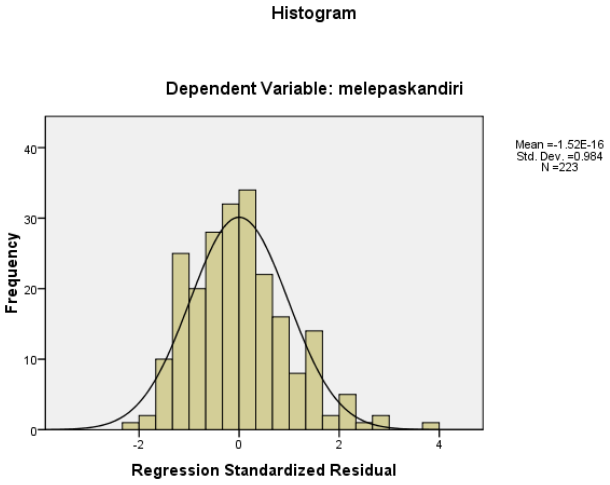
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.139	.811		2.638	.009		
	Gender	-.220	.126	-.113	-1.745	.082	.989	1.011
	Age	.086	.079	.078	1.087	.278	.820	1.220
	Occupation	.090	.053	.113	1.685	.093	.935	1.069
	Nationality	.379	.246	.110	1.541	.125	.824	1.213
	Destination information Source	.023	.073	.021	.319	.750	.969	1.032
	Purpose of visit	.837	.283	.200	2.960	.003	.917	1.091
	Group type	-.240	.135	-.124	-1.779	.077	.860	1.163

a. Dependent: Escape

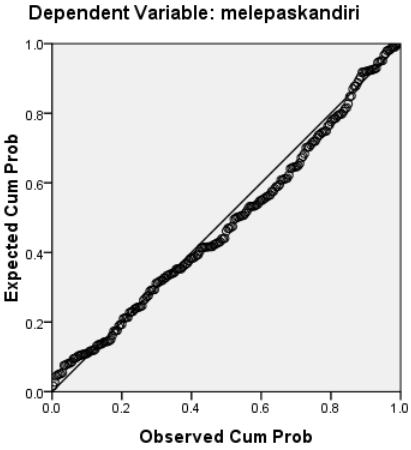
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.7527	5.6211	4.1480	.50047	223
Std. Predicted Value	-4.786	2.943	.000	1.000	223
Standard Error of Predicted Value	.150	1.210	.270	.097	223
Adjusted Predicted Value	1.3138	5.8539	4.1465	.52063	223
Residual	-3.23692	5.86080	.00000	1.48947	223
Std. Residual	-2.139	3.872	.000	.984	223
Stud. Residual	-2.196	3.939	.000	1.001	223
Deleted Residual	-3.41204	6.06435	.00143	1.54179	223
Stud. Deleted Residual	-2.216	4.080	.002	1.008	223
Mahal. Distance	1.174	140.983	6.969	9.935	223
Cook's Distance	.000	.067	.004	.009	223
Centered Leverage Value	.005	.635	.031	.045	223

a. Dependent: Escape



Normal P-P Plot of Regression Standardized Residual



Multiple Regression Analysis: Management and Safety

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.350[a]	.122	.094	3.98499	.122	4.282	7	215	.000	1.809

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Management and Safety

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	475.983	7	67.998	4.282	.000[a]
	Residual	3414.223	215	15.880		
	Total	3890.206	222			

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Management and Safety

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	9.994	2.135		4.681	.000		
	Gender	-.294	.332	-.057	-.885	.377	.989	1.011
	Age	-.075	.209	-.025	-.358	.721	.820	1.220
	Occupation	.437	.140	.205	3.110	.002	.935	1.069
	Nationality	2.267	.647	.247	3.506	.001	.824	1.213
	Destination information Source	-.280	.192	-.094	-1.453	.148	.969	1.032
	Purpose of visit	.079	.745	.007	.107	.915	.917	1.091
	Group type	-.014	.355	-.003	-.040	.968	.860	1.163

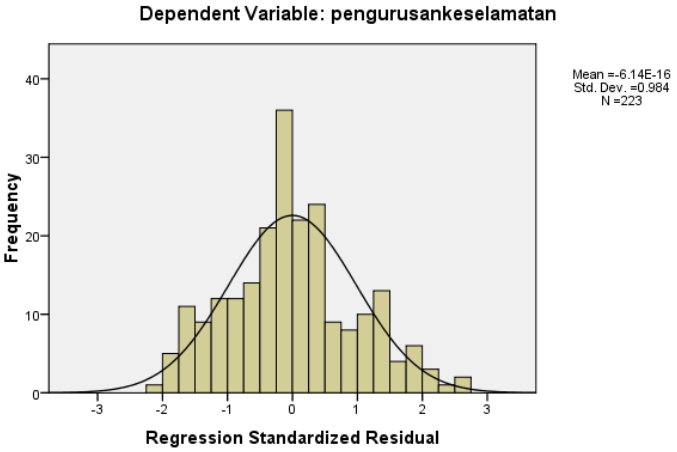
a.Dependent: Management and Safety

Residuals Statistics[a]

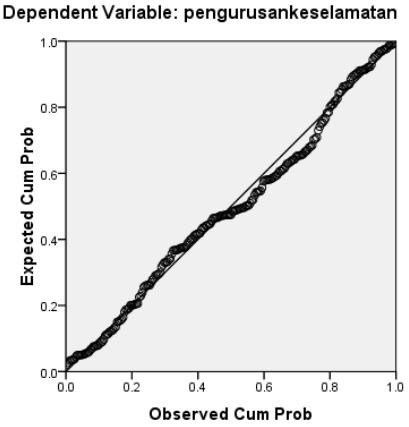
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	9.5289	16.8847	13.0897	1.46426	223
Std. Predicted Value	-2.432	2.592	.000	1.000	223
Standard Error of Predicted Value	.394	3.187	.711	.254	223
Adjusted Predicted Value	9.2471	16.9135	13.0884	1.47221	223
Residual	-8.04408	10.33929	.00000	3.92166	223
Std. Residual	-2.019	2.595	.000	.984	223
Stud. Residual	-2.080	2.669	.000	1.002	223
Deleted Residual	-8.54034	10.94039	.00128	4.06991	223
Stud. Deleted Residual	-2.096	2.708	.001	1.007	223
Mahal. Distance	1.174	140.983	6.969	9.935	223
Cook's Distance	.000	.052	.005	.008	223
Centered Leverage Value	.005	.635	.031	.045	223

a. Dependent Variable: Management and Safety

Histogram



Normal P-P Plot of Regression Standardized Residual



Multiple Regression Analysis: Natural Beauty

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.274[a]	.075	.045	1.80743	.075	2.494	7	215	.018	1.860

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Natural Beauty

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.027	7	8.147	2.494	.018[a]
	Residual	702.363	215	3.267		
	Total	759.390	222			

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: Natural Beauty

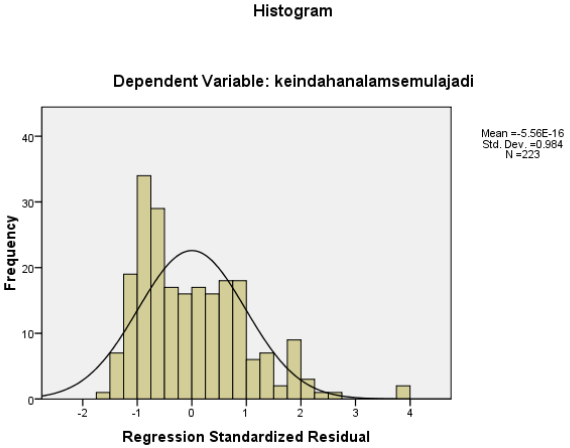
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.711	.968		1.767	.079		
	Gender	.102	.151	.045	.677	.499	.989	1.011
	Age	-.052	.095	-.040	-.553	.581	.820	1.220
	Occupation	.097	.064	.104	1.528	.128	.935	1.069
	Nationality	.686	.293	.169	2.340	.020	.824	1.213
	Destination information Source	-.065	.087	-.049	-.739	.461	.969	1.032
	Purpose of visit	.533	.338	.108	1.579	.116	.917	1.091
	Group type	.325	.161	.143	2.015	.045	.860	1.163

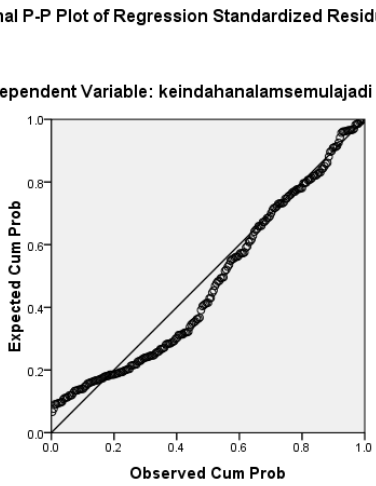
a. Dependent: Natural Beauty

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.1044	6.5006	4.7354	.50683	223
Std. Predicted Value	-3.218	3.483	.000	1.000	223
Standard Error of Predicted Value	.179	1.445	.322	.115	223
Adjusted Predicted Value	2.8486	6.5945	4.7377	.52415	223
Residual	-2.71872	6.93774	.00000	1.77871	223
Std. Residual	-1.504	3.838	.000	.984	223
Stud. Residual	-1.562	3.905	.000	1.002	223
Deleted Residual	-2.93348	7.18897	-.00228	1.84330	223
Stud. Deleted Residual	-1.568	4.041	.002	1.009	223
Mahal. Distance	1.174	140.983	6.969	9.935	223
Cook's Distance	.000	.076	.005	.009	223
Centered Leverage Value	.005	.635	.031	.045	223

a. Dependent: Natural Beauty





Multiple Regression Analysis: Infrastructure and the city of George Town

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.325[a]	.105	.076	2.09966	.105	3.620	7	215	.001	2.041

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: infrastructure and Georgetown

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.706	7	15.958	3.620	.001[a]
	Residual	947.846	215	4.409		
	Total	1059.552	222			

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111.706	7	15.958	3.620	.001[a]
	Residual	947.846	215	4.409		
	Total	1059.552	222			

a. Predictors: (Constant), Group Type, Destination Information Source, Gender, Occupation, Nationality, Purpose of Visit, Age

b. Dependent Variable: infrastructure and Georgetown

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5.020	1.125		4.463	.000		
	Gender	-.179	.175	-.066	-1.024	.307	.989	1.011
	Age	-.241	.110	-.156	-2.188	.030	.820	1.220
	Occupation	.136	.074	.123	1.843	.067	.935	1.069
	Nationality	1.254	.341	.261	3.680	.000	.824	1.213
	Destination information Source	-.167	.101	-.108	-1.652	.100	.969	1.032
	Purpose of visit	.411	.392	.070	1.046	.297	.917	1.091
	Group type	-.205	.187	-.076	-1.095	.275	.860	1.163

a. Dependent: Infrastructure and Georgetown

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.6777	8.0731	5.9552	.70935	223
Std. Predicted Value	-3.211	2.986	.000	1.000	223
Standard Error of Predicted Value	.208	1.679	.375	.134	223
Adjusted Predicted Value	3.3026	8.0112	5.9540	.71619	223
Residual	-4.20776	8.45379	.00000	2.06629	223
Std. Residual	-2.004	4.026	.000	.984	223
Stud. Residual	-2.041	4.115	.000	1.002	223
Deleted Residual	-4.36628	8.83264	.00117	2.14042	223
Stud. Deleted Residual	-2.057	4.278	.002	1.008	223
Mahal. Distance	1.174	140.983	6.969	9.935	223

Cook's Distance	.000	.095	.004	.009	223
Centered Leverage Value	.005	.635	.031	.045	223

a. Dependent Variable: infrastructure and Georgetown