
FACTORS AFFECTING TO REVISIT OF THAIS' TOURISTS WITH LOGISTIC REGRESSION: A CASE STUDY OF HUA-HIN IN PRACHUAP KHIRIKHAN PROVINCE, THAILAND

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ABSTRACT

Tourism has been becoming the major sources of industries and incomes because of the associated links of the World's economy. The revisiting of Tourists is regarded as the key factors to the successful Tourism Industry. Thus the significant of the tourism research in relation to marketing field is one of the strategies to enlarge the numbers of tourists in Hua-Hin, Prachub khirikhan Province in Thailand where the natural tourist destinations have been well-known for Thai and foreign tourists, particularly beautiful beaches and other attractions nearby. The research aims to study factors of the revisiting of Thai Tourists. The study selected the simple random sampling method with 385 tourists by questionnaires. The analysis of the data used logistic regression to identify the significant factors of the revisiting. The study indicated that the lengths of stay and service quality by 75.3% of accurately statistic logistic results were the significant factors towards the marketing strategic plans for stimulating Thai Tourists to revisit Hua-Hin and expand the numbers of visitors.

Keywords: Tourism industry, Revisit, Logistic regression

INTRODUCTION

Tourism is one of the largest industries because it relates to the world economy as the major sources of incomes for communities and countries. In the past, the goal of marketing is to create as many new customers as possible but the finding new customers will be insufficient at the present. The enterprises should also focus on loyalty marketing or retention marketing (Shoemaker & Lewis, 1999). Many of tourism marketing researches have concentrated on repeat visitation as an antecedent of destination loyalty or the subjects of factors affecting repeated visitations and destination loyalty which is vital for tourism businesses from the economic perspective (Ahmad Puad Mat Som et al., 2012). For example, Hui, T.K. et al.(2007) assessed the satisfaction, recommendation and revisiting Singapore of different tourist groups Europe, Asia, Oceania and North America who departed from Singapore Changi International Airport. In addition, Haque & Khan (2013) explored factors influencing of tourist loyalty in case study on tourist destinations in Malaysia for making strategic marketing plans to encourage tourists to visit in Malaysia. And Suriya (2005) studied factors affecting revisit to Lampang province, Thailand as well. With many destinations relying on repeat business as a consequence revisiting intention has become an important research topic (Assaker et al., 2010). Particularly, adopting the repeated visitations was considered in the marketing competitions of attractions (Ahmad et al., 2012) because this increases the numbers of tourist visitors, retention and provoke into tourists but revisiting be measured in a temporal approach for more meaningful findings. (Mohammad & Ahmad, 2011)

Hua-Hin district in Prachuap Khirikhan province has been becoming one of the most popular tourist destinations in Thailand. The varieties of attractions including natural resources interest local and international tourists to visit Hua-Hin and raise the numbers of visitors every year for instance the total of tourists raised up 1,931,581 in 2011 and up to 2,603,308 in 2012. The trend is likely to increase every year (Tourism Authority of Thailand, 2012). These entice the business owners to invest and build more the attractions nearby Hua-Hin. Consequently, the varieties of places enable the tourists more choices to visit without the limitations of only visiting beaches. Therefore, based on a literature review above attract the researcher to identify the key factors that affect repeated Thais' visitor Hua-Hin, Phachuap Khirikhan and analyze the data with the logistic regression.

The paper is structured by the briefly review of the factors employed with repeated visitation and the research methodology used in this study. Subsequently, it followed by the results of the data analysis through descriptive statistics and a logistic regression indicating the significant predictors and the conclusion the study results.

Factors affecting to revisit of tourists

The five associated factors affecting to revisit of the tourists in this research including lengths of stay, destination image, service quality, novelty seeking and distance to destination.

Lengths of stay is the categorical variable about travel characteristics which are many researcher using in the questionnaires. Ahmad et al. (2012) and Nakornthab & Chancharat (2013) investigated determinants which influence to the lengths of stay's visit in Chiangkhan, Thailand.

Destination image is built to entice the tourists and expand the successful opportunity of the business (Graham, 2004) because the destination image influences to the decision making of the tourists (Coshall, 2000; O'Leary and Deegan, 2005 cited in Haque & Khan, 2013) and were the most important destination attributes and travel motives for repeat visitors to Sabah (Ahmad Puad Mat Som et al., 2012). Moreover, (Guy et al., 2010) showed a positive image of the destination enhances future intentions to return by Structural Equation Modeling (SEM) methodology.

Service quality is used to evaluate the expectation and the actual services of the customers (Parasuraman et al. 1985 cited in Haque & Khan, 2013). The gentle and compassionated service business can be brought the numbers of customers and incomes. If any attraction can reach the customers' expectations, the increase the numbers of tourists can be possible (Kamndampully and Duddy, 2001 cited in Haque & Khan, 2013). And the results from Ivyanno & Nila (2012) revealed that service quality has a positive influence on future behavioural intentions.

In tourism, the one of major antecedents of revisit intention is novelty seeking (Jang & Feng, 2007 cited in Ahmad et al., 2012). Novelty seeking and distance to destination become the powerful factors that are found to be affected to revisit of the tourists (Haque & Khan, 2013 and Jang & Feng, 2007). Distance from destination is suggested to be a useful antecedent to support the theoretical model especially novelty seeking seems to be more beneficial on revisit intension. (Badarneh & Ahmad, 2011) In tourism, novelty seeking is also investigated as an enhancer for tourist's satisfaction (Crotts, 1993 cited in Ahmad et al., 2012).

According to the study, the researcher allocated the Independent variables and Dependent variable which followed by the theory of the research as collected data and data analysis by using logistic regression.

Table 1 Variable and Characteristics

Variables		Characteristics
Independent variables	Lengths of stay	0 = 1 day , 1 = more than 1 day
	Destination image	1 = strongly disagree , 2 = disagree , 3 = Neither agree nor disagree , 4 = agree , 5 = strongly agree
	Novelty Seeking	1 = strongly disagree , 2 = disagree , 3 = Neither agree nor disagree , 4 = agree , 5 = strongly agree
	Service quality	1 = strongly disagree , 2 = disagree , 3 = Neither agree nor disagree , 4 = agree , 5 = strongly agree
	Distance to destination	1 = strongly disagree , 2 = disagree , 3 = Neither agree nor disagree , 4 = agree , 5 = strongly agree
Dependent variable	Repeated visitation	0 = non repeated visitation, 1 = Repeated visitation

RESEARCH METHODOLOGY

Collecting data

This study collected the data by questionnaires from 385 Thai tourists who visited Hua-Hin, Phachuap Khirikhan Province, Thailand with the simple random sampling method. The attribution items were assessed, using a 5-point rating scale from 5= strongly agree to 1= strongly disagree. The reliability was at 72.24% which was divided into two parts: general information of the respondents and the information about revisiting. Then the data was analyzed by using logistic regression technique from the Statistical Package for the Social Sciences (SPSS).

Logistic regression

The analysis and forecast of the results of the variables were separated into two parts (dichotomous outcome; failure and success). The difference between logistic regression and linear regression is that the outcome variable in logistic regression is dichotomous (Hosmer & Lemeshow, 2000). The logistic regression is an effective technique that is used to model the probability of success and adapt with different fields of studies such as tourism, social science and medical science. This technique uses to seek the relationship between dependent variable which involves with two sets of data (Y = 1 means events of the interest, Y= 0 means ordinary events) with X (independent variables) can be qualitative or categorical variables to predict the opportunity of the events of the interest (Y=1)

$$\text{From} \quad \ln[P/1-P] = B_0 + B_1X_1 + \dots + B_pX_p$$

$$[P/1-P] = e^{B_0 + B_1X_1 + \dots + B_pX_p}$$

$$\text{by} \quad P = \left[\frac{e^{B_0 + B_1X_1 + \dots + B_pX_p}}{1 + e^{B_0 + B_1X_1 + \dots + B_pX_p}} \right]$$

and Y is binary and represents the event of interest coded as 0/1 for failure/success;

P is the proportion of successes;

1-P is the proportion of failure;

[P/1-P] is called the Odds Ratio which is used to compare the relative odds of the occurrence of the outcome of interest (e.g. repeated visitation or non repeated visitation)

if $OR=1$ Exposure does not affect odds of outcome, $OR>1$ Exposure associates with higher odds of outcome and $OR<1$ Exposure associates with lower odds of outcome;

X_s 's are the independent variables;

B_0 and B_i are the Y-intercept and slope; $i=1, 2... P$

RESEARCH Findings

General information and visiting details of respondents

Table 2 Profiles of respondents

Variables	Descriptions	Percentage
Gender	Male	38.70
	Female	61.30
Age	Below 25	21.29
	25-35	32.21
	Over 35	46.50
Experience of visiting Hua-Hin	Never visit	42.34
	Ever visited	57.66
Lengths of stay	1 day	46.23
	More than 1 day	53.77
Revisit intention	Yes	52.73
	Recommend to other people	47.01
	No	0.26

Table 2 indicated that the majority of respondents were female (61.30%), over 35 years of age (46.50%), Ever visited to Hua-Hin (57.66%), Lengths of stay more than 1 day (53.77%), and Revisit intention (52.73%)

Logistic regression

Table 3 Logistic regression of revisiting of Thais' tourist in Hua-Hin, Thailand with the Enter selection method

Variables	Coefficient	Standarderror	Wald test	Significance	Odd ratio
Lengths of stay	2.115	0.241	77.117	0.000*	8.293
Destination image	-0.207	0.194	1.14	0.286	0.813
Novelty seeking	-0.294	0.216	1.849	0.174	0.745
Service quality	0.467	0.177	6.946	0.008*	1.595
Distanceto destination	-0.025	0.173	0.021	0.884	0.975
Constant	-2.534	1.031	6.04	0.014*	0.079

*Significant level at 0.05

The results of the logistic regression analysis from Table 3 show Lengths of stay and Service quality were statistically significant (significance < 0.05). The specific logistic regression model fitted to the data was

$$\ln[\text{Revisit/Non-revisit}] = -2.534 + 2.115 \text{Lengths of stay} + 0.467 \text{Service quality}$$

This implies that revisiting of Thai tourists in Hua-Hin, Thailand was related to the two independent variables, Lengths of stay and Service quality.

The exponential values of the coefficients are termed “odds ratios”. Therefore, the odds ratio for Lengths of stay was 8.293 indicating that the repeated visitation of Thais’ tourist in Hua-Hin are increased by a factor of 8.293 if the visitor stays more than 1 days compared to 1 day adjusting for the effects of the other independent variable in the model.

The predictor (Service quality) recorded an odds ratio of 1.595. Thus, the odds of the repeated visitation compared with the non repeated visitation increased by a factor of 1.595 for a unit increasing in Quality of service adjusting for the effects of the other independent variable in the model.

If the coefficient of variable was considered, the factors affected the repeating visitation of Thais’ tourist consisted of Lengths of stay and Service quality (positive coefficient and odds ratio > 1). Destination image, Novelty seeking and Distance to destination were predictors which involved with non repeating visitation (negative coefficient and odds ratio < 1).

Table4 Hosmer and Lemeshow goodness of fit statistic with Enter selection method

Chi-square	df	Significance
13.200	8	0.105*

*Significant level at 0.05

Table 4 displays Hosmer and Lemeshow goodness of fit statistics and Significance equalled 13.200 and 0.105 (Significance > 0.05), respectively. Therefore, the model was exactly correct and fitted with the data.

Table5 Classification Table with the Enter selection method

Observed		Predicted		
		Visitation		Percentage Correct
		Non repeated visitation	Repeated visitation	
Visitation	Non repeated visitation	118	45	72.20
	Repeated visitation	55	167	75.30
	Overall Percentage			74.00

Table 5 reveals the percentage correct of predicting observed from the values with logistic model which corrected by 72.20% and 75.30% with classification cut point 0.5 in group of non repeated visitation and repeated visitation Thais' tourist, respectively. It correctly classified 74.00% of the cases indicating a good fit.

Table 6 Logistic regression of revisiting of Thais' tourist in Hua-Hin, Thailand with Backward (Wald) selection method

Variables	Coefficient	Standarderror	Wald test	Significance	Odd ratio
Lengths of stay	2.126	0.240	78.166	0.000*	8.379
Novelty seeking	-0.412	0.188	4.794	0.029*	0.663
Service quality	0.473	0.172	7.532	0.006*	1.605
Constant	-3.122	0.780	16.024	0.000*	0.044

*Significant level at 0.05

The results of the logistic regression analysis from Table 6 show the Lengths of stay, Novelty seeking and Service quality were statistically significant (significance < 0.05). The specific logistic regression model fitted to the data was

$$\ln[\text{Revisit/Non-revisit}] = -3.122 + 2.126 \text{Lengths of stay} - 0.412 \text{Novelty seeking} + 0.473 \text{Service quality}$$

This implies that revisiting of Thai tourists in Hua-Hin, Thailand was related to the three independent variables, Lengths of stay Novelty seeking and Service quality.

The exponential values of the coefficients or odds ratio for Lengths of stay was 8.379 (more than 1) indicating that the revisiting of Thais' tourists in Hua-Hin would be increased by a factor of 8.293 if the visitor stayed more than 1 day compared to 1 day adjusting for the effects of the other independent variable in the model.

Table 7 Hosmer and Lemeshow goodness of fit statistic with Backward (Wald) selection method

Chi-square	df	Significance
14.217	8	0.076*

*Significant level at 0.05

The odds ratio for Novelty seeking was 0.663 (less than 1) indicating that the revisiting of Thais' tourists in Hua-Hin were increased by a factor of 0.663 for a unit increase in Novelty seeking adjusting for the effects of the other independent variable in the model. In other words, Novelty seeking was influential factor on non repeated visitation over repeated visitation of Thais' tourists.

The predictor (Service quality) recorded an odds ratio of 1.595 (more than 1). Thus, the odds of revisiting compared to non-revisiting increased by a factor of 1.595 for a unit increase in Quality of service adjusting for the effects of the other independent variables in the model.

Table 7 displays Hosmer and Lemeshow goodness of fit statistics and Significance equalled to 14.217 and 0.076 (Significance > 0.05), respectively. Therefore, the model was exactly correct and fitted with the data.

Table8 Classification Table with Backward (Wald) selection method

Observed		Predicted		
		Visitation		Percentage Correct
		Non repeated visitation	Repeated visitation	
Visitation	Non repeated visitation	118	45	72.40
	Repeated visitation	54	168	75.70
	Overall Percentage			74.30

Table 8 reveals percentage correct of predicting observed values with logistic model which corrected by 72.40% and 75.70% with classification cut point 0.5 in groups of non-revisiting and revisiting Thais' tourists, respectively. It correctly classified 74.30% of the cases indicating a good fit.

5 Conclusion

A binary logistic regression analysis was performed to predict revisiting of Thai tourists in

Hua-Hin Phachuap Khirikhan Province, Thailand from collected predictors such as the lengths of

stay, destination image, novelty seeking, service quality and distance to destination. The specific

target Thai tourists' behavior of interest was repeated visitation.

Two predictor variables included in the model by Enter selection method were: a) lengths of stay and b) service quality. For example, the odds of repeated visitation was increased by the factor of 8.293 if Thai tourists stay more than 1 day compared to 1 day and the odds of revisiting compared to non-revisiting would be increased by the factor of 1.595 for a unit increase in Quality of service, controlling for other variables in the model. The logistic model correctly classified 74.00% of the cases.

Three predictor variables included in the model by Backward (Wald) selection method were: a) lengths of stay, b) novelty seeking and c) service quality. For example, the odds of repeated visitation were increased by the factor of 8.379 if Thai tourists stay more than 1 day compared to 1 day, the odds of revisiting compared to non-revisiting would be increased by a factor of 0.663 and 1.605 for a unit increase in novelty seeking (In other words, Novelty seeking was influential factor on non repeated visitation over repeated visitation of Thais' tourists) and quality of service controlling for other variables in the model. The logistic model correctly classified 74.30% of the cases.

As a result, the essential factors affected to repeated visitation of Thai tourists in Hua-Hin, Phachuap Khirikhan Province, Thailand by logistic regression involved with lengths of stay, novelty seeking and service quality. The key finding was that the selected variables are important correlates of repeated visitation of Thais' tourists in Hua-Hin Phachuap Khirikhan Province, Thailand. Notwithstanding, all factors were the strategic marketing plans to stimulate the numbers of the tourists and revisiting numerous times which could increase the loyalty of the destination by revealing empirical results that repeated the intention of Thais' tourists to revisit as well as recommending willingly Hua-Hin to the other people. As a result, to preserve loyal customers that is a crucial contributor to the profitability of business as Hsu et al. (2008) discussed. In addition, repeat visitor should be measured in short term for greater meaningful findings as Badarneh & Mat Som (2011) discussed.

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