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# Factors Affecting Sustainable Tourism Destination Management in Lawachara National Park, Sylhet, Bangladesh

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# Abstract

This study examined the external and internal factors affecting on sustainable tourism destination management (STDM) in Lawachara National Park (LNP) in Moulvi Bazar, Sylhet, Bangladesh. It is one of the main tourist attractions of Sylhet region. The main aim of the study was to gain knowledge to practice STDM in LNP. Objectives were to examine the external and internal factors that are influencing STDM in LNP and to investigate the level of external & internal factors related to STDM in LNP. Conceptual framework and research hypothesizes showed that external factors like political, economic, socio-culture and technological and internal factors like network management organization, information provider and community brand builder had the relationship with sustainable tourism destination management. The data was collected though a required quantitative way questionnaire with participation of 380 respondents of domestic tourists. Findings showed that factors like political, socio-culture and network management organization comes as negative and less supportive factors to STDM in LNP. The use ofadvance technology and successful coordination among stakeholderscould bring solution for STDM in LNP. Further research on external and internal factors affecting STDM in LNP would bringmore result in future.

Keywords: sustainable tourism, destination management, tourism industry, domestic tourists,

Lawachara National Park, STDM, Bangladesh

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# Introduction

According to WTTC (2017), Bangladesh's report in 2016, travelling and tourism industry in Bangladesh has been contributed with economic growth that the total amount is 4.3% of GDP (USD 10.6 billion).Lawachara National Park is one of the most popular national parks of Bangladesh (Ahsan, 2007). It is considered as the tourism hub of Sylhet division in Bangladesh. This park is located at KamalganjUpazilla, Moulvi Bazar district, situated within the West Bhanugach Reserve forest.It is almost 160 km (99 miles) northeast of Dhaka and 60 km (37 miles) from Sylhet. Srimongal town is situated 8 kilometers far from Lawachara National Park.

Tourism increases income, create employment, and bring wealth, so that it is one of the leading growing industries in the world. It provides economic benefit for the country, region and even to the local communities. It's fast expansion impacting negatively to the environment and socio culture also. Among tourism activities domestic tourism is approximately 80% (Neto, 2002). According to the Eplerwood International Trip Report January/ February 2009 the tourist arrival number of Lawachara National Park was 58,946 persons. According to the Forest Department of Bangladesh in 2017 there were 170,000 domestic tourists visited Lawachara National Park. The area of Bangladesh is 147,570 km<sup>2</sup>. As a densely populated country 1236 population per km<sup>2</sup> (World Bank, 2017) is a threat to the ecosystem of Bangladesh. Tourism is growing fast and unplanned way here so sustainable tourism could be a solution for this problem (Butowski, 2012). For this reason, sustainable tourism destination management is very much needed in Lawachara National Park.

For the difficulties of implementation of the concept of sustainable tourism, some authors (Fenell, 2005) took initiative to find out the way that how sustainable tourism could be implemented. It is difficult to achieve the objectives of sustainable tourism at the same time to get benefited economically in tourism industry. Conflict of interest comes between the implication of sustainable tourism and gain economic profit. Norms and principles could be followed to implement the sustainable tourism. It is important for all the stakeholders to understand that sustainable tourism would bring good things in future for the industry. The idea of sustainable tourism should be the key factor before taking and decision about tourism sector. (Jovičić, 2016). Though tourism industry is growing fast but it has some negative impacts. For this reason, all over the world sustainable tourism is accepted as a desirable and politically suitable method to tourism development (Sharpley, 2003).

Sustainable tourism is often talked about to keep balance between economic and environmental anxieties (Briguglio, Vella, & Moncada, 2019). Sustainable tourism is such kind of development which could be sustained for an indefinite period (Zhang & Chan, 2019). The vital goal of the destination management is to give memorable experience to the visitors and give efficient service to the guest and provide them with high quality tourist product (Fuchs & Weiermair, 2016). Destination management is also important for economic development, sustainable tourism development, ecological conservation, social and cultural protection and to achieve the goal of overall development of a tourism destination. Finally, sustainable tourism is not only the symbol of protecting environment but it is also related to social, economic, political, cultural and managerial factors. For implementation of sustainable tourism, it is necessary to take long term plan to achieve the objectives. All the stakeholders should come together to take long term decision to implement the sustainable tourism because to reduce the negative impact of tourism and sustainable tourism should be the main issue. (UNEP, 2005). Christopher and Shepherd (1998) define destinations as the focus point for amenities and services where tourists can meet their needs. Destination management is challenging. Destination should fulfill the needs of the tourists, tourism related businesses, the requirements of the local community, local business and industries (Howie, 2003).

The research objectives were to examine the external and internal factors that are influencing sustainable tourism destination management (STDM) in LNP and to investigate the level of external & internal factors related to STDM in LNP. The benefit of this research would touch many points. Academic benefit, benefit for tourism industry and policy makers would be benefited from this study. The findings of the study will help to create the ways to increase employment opportunity.

The research questions of this study were what are the external i.e. political, economic, socio-culture and technological and internal factors i.e. network management organization, information provider and community brand builder affecting sustainable tourism destination management in Lawachara National Park, Moulvi Bazar, Sylhet, Bangladesh?

Research hypotheses as a part from the conceptual framework and it is also essential for quantitative research. The hypothesis of this study conducted by PEST (Political, Economic, Socio-Culture, Technology) factors and internal factor like destination marketing that were developed based on the conceptual framework that researcher identifies hypotheses to be tested for the confirmation was illustrated. According to the hypothesis in this study external as PEST factors and internal as destination marketing factors(X) had a relationship with the dependent factor means (Y) sustainable tourism destination management (STDM).

# Methodology

Quantitative method was followed to know that the focus on attention population (sample size). Study used a sample from a wider study population that was used to generate data that can be generalized to a larger community and the data was presented in numerical tables. Quantitative research was about prediction, generalizing a sample to a group of subject. Conceptual framework for PEST and destination marketing on Sustainable Tourism Destination Management (see **Figure 1**).

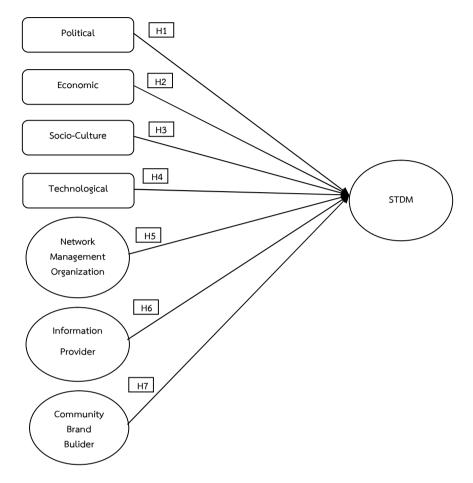


Figure 1. Conceptual framework

For the population of this study, the researcher conducted to random sampling in this study by using from different group of sampling of population. Therefore, the appropriate minimum sample size was obtained by using Yamane (1973) at 95% (A 95% confidence level and 5%=0.05 precision levels are assumed) confidence level to calculate the sample size in this research as Yamane formula below (Yamane, 1973)

$$n = \frac{N}{(1+Ne^2)}$$

- n = size of sample
- N = size of population
- E = level of precision

In 2017, there were 170,000 domestic tourists visited LawacharaNatinal Park. Therefore, Yamane shown about result of the formula conducted are N=170,000 and e=0.05. in this hypotheses, Yamane formula of sample size (n) shown as below:

 $N = (170,000/(1+(170,000)\times(0.05)^{2}))$ 

= 399.061 (approx.)

Sample size is 400.

Research was conducted by a random sampling technique in this study by using a different group of sampling of populations. Therefore, the appropriate minimum sample size will be obtained by using Taro Yamane (1973) at 95% (A 95% confidence level and 5%=0.05 precision levels are assumed) confidence level to calculate. Decision making would be measured on a Five point Likert Scale for the purpose of the study.

Where, 1= Strongly disagree and 5= Strongly agree

Researcher has selected 400 domestic tourists who have visited Lawachara National Park, Moulvi Bazar,Sylhet. The interpretation of the mean score applied during the data analysis is shown below suggested by Sharifi (2015).

Interval width formula Model

 $\label{eq:Interval} \textit{Interval width of each level} = \frac{\textit{The Highest Score} - \textit{The lower Score}}{\textit{Interval Number}}$ 

The interval level = 
$$\frac{Maximum Score - Minimum Score}{n} = \frac{5-1}{5} = 0.80$$

# The interval level = 0.80

Research instrument wasa questionnaire, which consisted of 30 close ended questions in Bengali for domestic tourists who visited Lawachara National Park. According to the sample size, 400 questionnaires were distributed at Lawachara National Park, among them 380 questionnaires were collected.

#### Data collection

Primary datawas collected during November, 2018. This data would be also collected by through of questionnaire and study field in order to survey by using random sampling to get target the group and individual of respondents for gathering data. Random sampling got from the real sample size of population by Yamane formula comprised: Domestic tourists who have visited the Lawachara National Park. Secondary data was conducted from other different sources such as: articles, books, journals, theses, newspapers, magazine and Burapha University library online, all

of those relevant with concepts, theories, ideas, supporting researchers and in order to complete of researching.

For data collection procedure, there were30 close ended questions in Bengali for domestic tourists who visited Lawachara. In this study, 400 questionnaires were distributed at the main gate of the Lawachara National Park. There were some volunteers also with the researcher who helped to collect data. For time constraint the researcher was able to collect 380 questionnaires from the respondents out of 400 questionnaires. A total of 380 completed questionnaires were collected with the total response rate of 95%. Data has been collected from 11 November to 23 November 2018. Researcher had taken the assistance from some volunteers to collect data in Lawachara National Park.

#### Data Analysis

For analyzing data of this research, Statistical Package for social Science (SPSS 23.0) was used as the main software to get the result. Illustrative statistics could support investigation to explain and evaluate basic attributes of the data in the research. In this study, researcher tried to illustrate objectives of the research by descriptive statistical analysis including mean and standard deviation score of all the factors. The demographics characteristics were evaluated by using mean and standard Deviation (SD) for Gender, Age, Economic, Occupation and Education Level of the respondent's domestic tourists who have visited LNP.

To examine the external and internal factors that were influencing STDM in LNP and to investigate the level of external & internal factors related to Sustainable Tourist Destination Management in LNP, Multiple Regressions is used to test the hypothesis of the study. Multiple Regression analysis (MRA) refers to a linear statistical technique to find are the best relationship between dependent variable and several other independent variables by through the least square method (Mekanik et al. 2013). Multiple regression model is one of the most prevalent methodologies in business research (Hopkins & Ferguson, 2014). The model used by the researcher is shown below.

 $Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k$ 

Where,

- Y = The value of variable Y (STDM)measured that known particularX valve
- X = Independent variables
- $\alpha$  = The point where the regression line intersects the Y Axis
- $\beta$  = The slope of the regression line, determined by the amount of change in Y for each amount of change in X
- β<sub>1</sub> = The first slope, β<sub>2</sub> = The second Slope and β<sub>k</sub> = The last slope.
  In my study we have seven independent variables as: Political is x<sub>1</sub>, Economics is x<sub>2</sub>,
  Socio Culture is x<sub>3</sub>Technology is x<sub>4</sub> and NMO is x<sub>5</sub>, IP is x<sub>6</sub> and CBB is

# **Research results**

The result of this study was from 380 respondents of domestic tourists who visited LNP and questionnaires used as research tool. The questionnaire was divided into two parts (1) demographics characteristics and (2) question related to factors that affecting on STDM for LNP. This study shows the case of Lawachara National Park, Moulvi Bazar, Sylhet by monitoring Sustainable Tourism Destination Management. Results of demographics characteristics composed of gender, age, education level, Occupations and Average incomes (In USD).

Variables	Options	Frequency	Percentage	
Gender	Male	272	71.6	
	Female	108	28.4	
Age	< 20 years Old	25	6.6	
	21-30 years Old	125	32.9	
	31-40 years Old	74	19.5	
	41-50 years Old	93	24.5	
	51-60 years Old	35	9.2	
	> 60 years Old	28	7.4	
Education level	Lower Than Bachelor	48	12.6	
	Bachelor	97	25.5	
	Masters	176	46.3	
	Doctoral	57	15.0	
	Others	2	.5	
Occupation	Student	66	17.4	
	Civil Servant	77	20.3	
	Private Employed	107	28.2	
	Business Owner	82	21.6	
	Others	48	12.6	
Average Income	<\$235 USD	89	23.4	
	\$ 236- \$353 USD	81	21.3	
	\$ 236- \$353 USD	54	14.2	
	\$472-\$589 USD	81	21.3	
	>\$590 USD	75	19.7	

Table 1 Sample characteristics among 380 respondents

**Table 1** shows that among 380 respondents, there were about 72% of them are male with frequency of 272 and about 28% of the respondents are 108 females. The respondents with high frequency 125 about 32% has the age distribution between 21 to 30 age, about 25% were in 41 to 50 age distribution, about 9% fall in the age group of 51 to 60 years and 7% of the respondents had the age above 60 years old. The education qualification of the respondents about 176 respondents had the Masters level and about 25% of the respondents had the Bachelor degree. In **Table 1**, we can see that about 13% of the respondents were students by profession, about 20% werecivilservant, and about 12% had the business. About 28% of the respondents had the income level below 235 USD and 71 respondents about 21% had the income level between 236 to 353 USD and 21% of the respondents had the income between 472 to 589 USD and about 19% had the income above 590 USD.

In this section, we present the different factors of Sustainable Tourism Destination Management in LNP. **Table 2** illustrates the frequency distribution on STDM factors attributes.

Factors	Opinion	Frequency	Percentage
Political	Agree	110	28.95
	Strongly Agree	270	71.05
Economical	Agree	106	27.89
	Strongly Agree	274	72.11
Socio-economic	Agree	70	18.42
	Strongly Agree	310	81.58
Technological	Agree	59	14.74
	Strongly Agree	324	85.26
Network Management Organization	Moderately Agree	17	4.47
	Agree	139	36.58
	Strongly Agree	224	58.95
Information Provider	Agree	99	26.05
	Strongly Agree	281	73.95

Table 2 Frequency Distribution among factors from 380 respondents

Table 2 (Continued)

Factors	Opinion	Frequency	Percentage
Community Band Builder	Moderately Agree	17	4.47
	Agree	92	24.21
	Strongly Agree	271	71.32
Sustainable Tourism Destination	Agree	52	13.68
Management	Strongly Agree	328	86.32

From the **Table 2**, we can see that in the case of individual attributes of the political factor the respondents about 71% strongly agree with the attributes and about 29% agreed with that fact. In the case of economic factor, we can say that about 72% of the tourists strongly agreed with the attributes of the economic factor. It is clearly shown that in the case of individual attributes of the socio-culture factor the respondents about 81% strongly agreed with the attributes. In the case of individual attributes of the technological factor, the respondents about 85% strongly agreed with the attributes. The network managementorganization factor the **Table 2** shows that the individual attributes of this factor the respondents about 58% strongly agreed with the attributes and only 4% moderately agreed with the fact. In the case of Information provider factor, the figure shows that the individual attributes of this factor the respondents about 73% strongly agreed with the attributes. The factor Information Provider in **Table 2** shows that the individual attributes of this factor the respondents about 71% strongly agreed with the attributes and 5% moderately agreed. In the **Table 2**, it is clearly seen that in the matter of individual attributes of the Technological Factor the respondents about 98% strongly agreed with the attributes.

The first objective of the study was to examine the external (political, Economic, Socioculture, Technological) factors and internal (Network Management organization, Information provider, Community Brand Builder) factors that are influencing STDM in LNP. Therefore, in order to answer this objective, descriptive statistics on Multiple Regression Analysis (MRA) was run by using the data from 380 respondents. Before analyzing the MRA, we should check the correlation among the factors using Pearson's correlation coefficient (r) within both X and Y variables, where X is the internal and external factors and Y is the STDM factor, it is the most important to make sure that all variables did not have too close correlation within each other. **Table 3** shows the result of Pearson's correlation between all variables.

Variable	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	Y
	Political	Economics	Socio-Culture	Technology	NMO	IP	CBB	STDM
X <sub>1</sub>	1	.457**	.086	233**	121*	.216**	.057	254**
X <sub>2</sub>	-	1	.083	.122*	.270**	.513**	.230**	.145**
X <sub>3</sub>	-	-	1	.320**	057	.136**	258**	189**
$X_4$	-	-		1	.339**	.142**	.086	.331**
$X_5$	-	-	-	-	1	.195**	.647**	.334**
X <sub>6</sub>	-	-	-	-	-	1	106*	.165**
X <sub>7</sub>	-	-	-	-	-	-	1	.436**
Y	-	-	-	-	-	-	-	1
R = 0.609	9							

Table 3 Pearson's Correlation Coefficient (r) between all variables

<u>Note</u>

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

The Pearson's Correlation coefficients illustrates the relationship between all variables included Political, Economics. Socio-culture, Technological, NMO, IP CBB between STDM. Correlations were considered strong for r > .7, moderate for .5 < r < .7; and weak for r < .5 (Ansorage et al., 2012). According to **Table 3**, the result showed that the relationships between external factor and internal factor are on moderate relationships. However, three was a weak relationshipbetween technology, NMO and CBB with STDM.

The second objective was to investigate the level of external and internal factors related to STDM in LNP. Therefore, in order to examine the objective, descriptive statistics showed in Tableswere used including mean and standard deviation (*SD*) of all external and internal variables demonstrating the performance of STDM on LNP. Moreover, Tables were shown detail all of each variables including mean and standard deviation (*SD*).

Variables	Mean	SD	Agreement Level	Performance	
Political	4.71	0.45	Strongly Agree	Very Good	
Economic	4.72	0.44	Strongly Agree	Very Good	
Socio-culture	4.81	0.38	Strongly Agree	Very Good	
Technological	4.85	0.35	Strongly Agree	Very Good	
Network Management Organization	4.54	0.58	Strongly Agree	Very Good	
Information Provider	4.73	0.43	Strongly Agree	Very Good	
Community Brand Builder	4.66	0.55	Strongly Agree	Very Good	
Sustainable Tourism Destination	4.86	0.34	Strongly Agree	Very Good	
Management					

**Table 4** Means and Standard Deviations (SD) of All variables (n = 380)

In **Table 4** shows the summary of all variables for 380 domestic tourists from Lawachara National Park, Moulvi Bazar, Sylhet for evaluation of STDM. The result of mean showed that the good range of mean calculated 4.54 to 4.86. Respondents in all criteria; Political, Economic, Socio-culture, Technological, Network Management Organization, Information Provider, Community Brand Builder were in a very good level.

**Table 5** shows the result of Multiple Regression Analysis (MRA) of the factors with STDM and six of them were appeared as statistical significances in the test. Moreover, the multi collinearity problem for the different independent variables was examined using VIF (Variance Inflation Factor). The heights VIF values of the different independent variables were all acceptable, being less than five. Thus there is no collinearity associated with the independent variables.

	Unstandardized		Standardized		р	Collinearity	
Variable	Coefficients		Coefficients	t		Statistics	
	Coefficient	S.E.	β			Tolerance	VIF
(Constant)	3.860	.203	-	19.009	<.01**	-	-
Political	261	.036	396	-7.218	<.01**	.561	1.781
Economic	.192	.039	038	4.858	<.01**	.628	1.593
Socio-culture	.017	.038	261	-5.498	<.01**	.752	1.329
Technological	208	.029	.393	8.542	<.01**	.800	1.249
NMO	.246	.041	063	-1.035	.302 <sup>ns</sup>	.450	2.224
IP	042	.042	.160	2.746	<.01**	.498	2.010
CBB	.117	.031	.481	8.543	<.01**	.534	1.871

Table 5 Results of the Regression Coefficient of Factors Associated with STDM

<u>Note</u>

ns = Not Significant

\*\*: Significant at the level of 0.01; F (31.345) = 2.0342

**Table 5** illustrates the regression coefficient of factors that are influencing on STDM-LNP. The findings showed that there are six factors including, political, Economic, Socio-culture and Technological, IP and CBB are significant at 0.01 levels. Therefore, the result of examine equation between dependence and independence variable from predictor shows as below:

Examine equation:

# Y = 3.860 - 0.261 X1 + 0.192 X2 + 0.017 X3 - 0.208 X4 + 0.246 X5 - 0.042 X6 + 0.117 X7

Therefore, the hypothesis ( $H_5$ ,  $H_2$ ,  $H_3$ ,  $H_4$ ,  $H_6$  and  $H_7$ ) are supported. However, according to Table 5 shown that there are three factors (Political, Economic and Socio-culture) would might used in order to examine the STDM of the external factors were influencing on the STDM-LNP.

Table 6 A summary of the hypothesis testing

Hypothesis	Results		
$H_1$ : There is relationship between Political factor and	The $H_1$ (Political) is supported.		
STDM.			
$\mathrm{H}_{2}\!\!:$ There is relationship between Economic factor and	The $H_2$ (Economic) is supported.		
STDM.			
$\ensuremath{H}_3$ : There is relationship between Socio-Culture factor and	The H <sub>3</sub> (Socio-Culture) is supported.		
STDM.			
$\mathrm{H}_4\!\!:\mathrm{There}$ is relationship between Technological factor and	The $H_4$ (Technological) is supported.		
STDM.			
$H_5$ : There is relationship between Network management	The $H_5$ (Network management		
organization factor and STDM.	organization) is less supported.		
$H_6$ : There is relationship between Information provider	The $H_3$ (Information provider) is		
factor and STDM.	supported.		
H <sub>7</sub> : There is a relationship between Community brand	The $H_3$ (Community brand builder) is		
builder factor and STDM.	supported.		

As the result, **Table 6** shows on hypothesis testing of this study and we examined that there was relation between political, economic, socio-culture, technological, information provider and community brand builder factors on sustainable tourism development management in LNP that were influencing on STDM–LNP, these six hypothesis support the hypothesis. In this study, the researcher tried to find the answer of the research question "What are the external and internal factors affecting sustainable tourism destination management in Lawachara National Park, Moulvi Bazar, Sylhet, Bangladesh?" The results of this study showed that not all factors were influence positively over STDM in LNP. Therewasa weak relationship between Network management organization about STDM in LNP.All stakeholders those were involved here should have the smooth collaboration and cooperation with each other. Thus, the Network management organization could be more effective in the study in future.

# Discussion, recommendation and conclusion

The result suggested that there were only two factors can be examined within relationship between external factor and internal factor on STDM-LNP. Findings of this study discussed based on external and internal factors affecting on the sustainable tourism destination management in LNP. Analysis showed that political andsocio-culture factors come negative in this research. Other factors came positive in the analysis. As 'X' factors, the political and socio-culture factors were very much related to each other and dependent on each other, which were not right according to analysis. As related to independent variables, they should not be very closely related. The other external and internal variables remained positive. Network management showed a weak significance in the analysis. In order to achieve high level of STDM in LNP, the most important for all stakeholders those were involved here should have the smooth collaboration and cooperation with each other. Thus the Network management organization could be more active in the study in future.

The finding demonstrated that how the external and internal factors affecting STDM in LNP. Lawachara National Park is one of the main tourist attractions in the Sylhet region, Bangladesh. To develop sustainable tourism destination management in LNP, there is no alternative to carry the guideline to reduce the negative impact over its natural environment. In this study political, socio-culture and network management organization has come as negative and less supported to the STDM in LNP. However, in order to achieve high level of STDM in LNP, use of advance technology and stakeholders who were involved here should have more smooth collaboration and cooperation with each other.

In this theory, the Multiple Regression Analysis (MRA) finding supported the proposed model of STDM in LNP. There were some factors which were statistically significant relationships with STDM in LNP. There are some factors which are not statistically significant in STDM in LNP. However, all the factors have more or less relation with STDM in LNP.To develop sustainable tourism destination management, there was no alternative to carry the guideline to reduce the negative impact over the natural environment of this destination. In this study political, socioculture and network management organization suggested negative and less supported to the STDM in LNP. However, in order to achieve high level of STDM in LNP, the most important for all stakeholders those were involved here should have the plane collaboration and assistance with each other.

This study has some limitations, namely the study was onlyquantitative so that qualitative method could be followed. The results of study were analyzed by using multiple regression analysis (MRA). Thus, the future study should be analyzed by using confirmatory factor analysis (CFA). The respondents were domestic tourists only, in future foreign tourists could be added as respondents. Finally, the sample size could be larger in further study as well.

In conclusion, objectives of the study were to examine the external and internal factors that were influencing STDM in LNP and investigated the level of external and internal factors related to STDM in LNP. Quantitative approach was applied in this research that the questionnaire was conducted and developed from the literature reviews on external and internal factors affecting STDM in LNP. The quantitative data were analyzed to answer the two objectives. The finding showed that all the factors were not strongly associated with STDM in LNP. However, there were two factors that can be used to examine on STDM in LNP including political and socio- culture factors. A negative relationship with STDM in LNP in the case of political (Beta = -0.202) and socio-cultural factors (Beta = .220). The result of these negative relationships suggested that much of political and socio-culture factors could be improved on STDM in LNP through the application of advance technology. Lastly, the result showed that external and internal factors which now affecting the STDM in LNP could achieve far better result through further research in future.

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