JYOTI PRAKASH BANARJEE

SUSTAINABLE TOURISM DEVELOPMENT

FUTURISTIC APPROACHES

Sustainable Tourism Development: Futuristic Approaches

Sustainable Tourism Development: Futuristic Approaches

Jyoti Prakash Banarjee

THE INFO LIBRARY

Published by The InfoLibrary,
4/21B, First Floor, E-Block,
Model Town-II,
New Delhi-110009, India

Sustainable Tourism Development: Futuristic Approaches
Jyoti Prakash Banarjee
ISBN: 978-93-5590-644-1

Table of Contents

Chapter 1	The Influence of Computerized Testing Methods in Selection Process on Employees Performance at West Sumatera Province Government	**1**
Chapter 2	The Role of Gastronomic Tourism Education in Sustaining Malaysian Heritage Food	**16**
Chapter 3	In-Game Factors and Technology Acceptance Factors in IncreasingIntention to Play Online Game	**27**
Chapter 4	Examining Push-Pull Motivation and Travel Intention for PotentialTravelers in Indonesia Using Theory of Planned Behaviour	**43**
Chapter 5	Why Tax Incentives Needed to Develop Homestay Industry in Tourist Village: A Quintuple Helix Perspective	**54**
Chapter 6	The Role of Philoxenia and Value Co-Creation on Re-Visit Intention	**60**
Chapter 7	Causality of Tourist Utility and Tourism Expense in The Tourism Object of Padang City: (Simultaneous Equation Model Approach)	**69**
Chapter 8	Responsibility Hotels and Airlines During Natural Disasters in The Tourist Destination Area	**77**
Chapter 9	Post-Earthquake Impact, Preparedness of Megathrust Earthquake, and Minangkabau Entrepreneurship	**85**

Chapter 10	Analysis Recycling of Food Waste Restaurant in Padang City	**91**
Chapter 11	The Muslim Traveller's Destination Choice	**101**
Chapter 12	Tourism Solid Waste Management System: An Investigation to Support Sustainable Tourism in Bukittinggi	**109**
Chapter 13	Sharia Supervisory Board (SSB) Function Supervision in The Application of Tabarru' Concept in Sharia Insurance in Indonesia	**121**
Chapter 14	Conserving Dragonfly Natural Habitat in Andalas University Campus Complex to Develop a Sustainable Thematic Ecotourism	**131**

1

The Influence of Computerized Testing Methods in Selection Process on Employees Performance at West Sumatera Province Government

Hendra Lukito[1a], Harif Amali Rivai[2]

[1,2]Faculty of Economics, Andalas University, Indonesia

[a)] Corresponding author: hendralukito71@gmail.com

Abstract

This study aims to determine the effect of computerized testing methods in the selecting process employees in the West Sumatra Province Government. The employee selection process consists of several stages, namely: conducting job analysis, determining the number of employees to be received and the source and conducting testing to obtain qualified prospective employees. The object in this study is civil servants who are in charge of agencies within the West Sumatra provincial government. The method of data collection in this study is to use primary data in the form of questionnaires and quantitative approaches. The questionnaires were distributed to civil servants in charge of agencies in the West Sumatra provincial government and the data was analyzed by SEM PLS. The model in this study emphasizes the importance of using computerized testing methods to change behavior and improve employee performance. The results showed that computerized testing had no effect on employee performance while the determinants of success in using information systems had a positive and significant effect on the performance of employees. The determinants of the success of using an information system that consists of relative benefits, suitability of value, convenience, experience and ability are only relative benefits that do not have a positive and significant effect on employee performance. The results of this study are expected to provide input to decision makers in the West Sumatra provincial government about the validity of the use of computerized testing methods in the selection process of civil servants. This is done so that the West Sumatra provincial government can improve the quality of employees and provide better services to the community.

Keywords: selection process, computerized testing, employee performance

1. Introduction

1.1 Background and Research Problem

Non-profit organizations including local governments are now required to be able to create high employee performance to improve service to the community. The success of the government is influenced by several factors, one of the important factors is human resources, because human resources are the actors of all activities related to all activities ranging from planning to evaluation that are able to utilize all the resources owned by the organization. Human resources are factors that play a role in an organization or government in providing services to the public [10].

The current world of work conditions where there is a lot of demand for work, but companies and governments often have difficulty in finding employees that fit their needs because very few have adequate qualifications. So far there have been many selections of prospective Civil Servants both at central government agencies and local government agencies that have been carried out in accordance with the stages in accordance with the concepts in human resource management and using advances in information technology. But the results of the selection obtained are Civil Servants who have been accepted and served in various agencies cannot produce the performance as expected. This situation is an indicator of the ineffectiveness of the selection process of Civil Servants in the central and regional government, including in West Sumatra Province. A study shows that shows that organizational performance and selection processes are interrelated with each other [11], whereas another study shows that in organizations that have operated globally, focusing on the selection process is often defeated with routine work demands to achieve organizational goals [12].

Therefore, to be able to realize the high performance of Civil Servants and be able to carry out their functions as public servants, appropriate efforts are needed to deal with and respond to all challenges related to the government's duties in the current autonomy era. One effort to realize the professional demands of civil servants has been that in recent years the government has implemented computerized based testing methods in selecting employees. A study states that the application of computerization in the field of human resources or Human Resource Information Systems (HRIS) in the public sector depends on environmental, organizational, and technological factors [13]. Civil servants have a very important role because civil servants are elements of the state employee to carry out government and development in order to achieve state goals. The smooth implementation of government and national development is very influential from the quality of Civil Servants as part of the state apparatus. In accordance with the law on staffing it is stated that civil servants who are capable of carrying out their duties professionally and responsibly in the completion of government and development tasks are required, and are free from Corruption, Collusion and Nepotism so that they can practice ideal governance and realization Good governance. Therefore, to get civil servants who are in accordance with the demands of the law, it is necessary to conduct a fair and objective civil servant selection process.

Technology is one of the non-physical or intangible assets that must not be ignored because it is very helpful for non-profit organizations including the government to achieve its goals. At present, almost all organizational activities depend on the use of technology. Efficient and effective management of human resources is determined by the application of technology in carrying out the main functions of human resource management. HRIS (Human Resources Information System) is a concept regarding the use and development of information technology for the effective management of functions and applications of human resource management. HRIS is a systematic procedure for collecting, storing, maintaining and restoring data needed by the organization regarding human resources, personnel activities and organizational characteristics [14]. One study mentioned that the use of information technology in the management of human resources consists of systematic procedures and functions to obtain, store, manipulate, retrieve, analyze, and disseminate information related to organizational human resources [13].

The most prominent factor affecting organizational activities today is technological change. This can be seen in various fields such as the use of computers to support work. Information technology has been growing rapidly in recent years and many have led to changes. The use of information technology in organizations has the potential to change the role of organizational members. However, one study found that almost 75% of all information technology usage programs did not achieve their goals [15]. Meanwhile, most information technology usage programs have never reached the implementation stage. In a survey conducted by Price Waterhouse, 25 percent of senior executives responsible for implementing information technology usage programs in the financial services sector ended in failure. Thus, it is very important for the organization to continue to examine the process and not be too quickly satisfied with the use of information technology in the organization. The government, through the testing of prospective civil servants who have been computerized, issued a large amount of funds for the provision of facilities and infrastructure so that the tests could provide objective results.

The application of human resource management aims to obtain qualified employees, namely employees have competence, creativity, and ethics. The West Sumatra provincial government has implemented technology-based employee management through a selection process that has used computerized testing methods. But in reality, these activities have not been able to meet the needs of high-performance and professional civil servants. This condition can be seen from the existence of culture in serving the people who have not been in accordance with the demands of the law regarding the main tasks and functions of civil servants in Indonesia. This fact was strengthened by complaints from the public related to the services provided by civil servants in the West Sumatra provincial government. The complaint is related to the discipline of employees who are rarely in the office during working hours, less friendly service, the timeliness of services that are not in accordance with standards, the existence of levies outside the provisions that apply when the community wishes to use services from the government.

West Sumatra Province in recent years has received many awards from the central government such as:

1. Rank II in the Capital Expenditure Ceiling Category above Rp. 20 billion. Awarded by the Ministry of Finance to the West Sumatra Province Road Infrastructure Office.
2. Literacy Charter, given by the National Library of Indonesia and IKAPI to the West Sumatra Governor for his contribution to the development of Literacy in West Sumatra.
3. The Best Province Driving Cooperatives and Entrepreneurship Growth. The award was given by the Minister of Cooperatives and UMKM RI.
4. Satya Lencana Pembangunan for Food Development given by President Jokowi.
5. Unqualified Opinion granted by BPK RI on the financial statements of the West Sumatra Provincial Government.
6. Satya Lencana Pembangunan for Population Development given by President Jokowi.
7. Provocative Provinces and City Eligible Cities for Children. Provided by the Minister of Women's Empowerment and Child Protection.
8. Regional award with the best provincial level TPID (Regional Inflation Monitoring and Control Team) given by President Jokowi.
9. Award of the Head of the Sharia Economic Driving Regions of the Association of Islamic Economics (IAEI).
10. Democracy Award from Rakyat Merdeka Online (RMOL).

All awards that have been won by West Sumatra province have not been evenly distributed for all fields and all offices under the administration of West Sumatra province. For the service that has already performed well this is certainly determined by the competence and professionalism possessed by each civil servant who is assigned to the service. Officials that have not yet received awards from the central government need to improve the competency and professionalism of the civil servants in charge, including by conducting an appropriate and objective selection process.

1.2 Research Benefits

The results of this study are expected to be of benefit to all parties concerned with the services provided by the West Sumatra provincial government. This research is expected to be able to contribute in the fields of management science, human resources management, and information systems. The results of this study are also expected to provide useful information for those who want to explore the employee selection process and the use of information systems in human resources management.

1.3 Research Scope

This study aims to analyze the effect of employee testing using computerized methods and the effective use of information systems in human resource management in non-profit organizations, namely the government. Theoretically, many factors and variables affect the acceptance of employees who have competency and quality, especially when viewed from the dimensions of Human Resources Management and Organizational Behavior. But in this study these factors and variables are only limited to the testing phase in the selection process and the relative advantages, suitability of values, convenience, experience and critical success factors in the use of information technology in the employee testing stage.

2. Literature Review

2.1 Performance Assessment

Performance appraisal is also known as: personal assessment, employee evaluation, work performance assessment, and efficiency assessment. Performance appraisal is a process used to determine whether a person does his work in accordance with established standards. Performance assessment is a process of measuring one's performance, while other experts argue that performance appraisal is a process that consists of the following steps [16]:

1) Comparing standard (actual) achievements.

2) Determine existing weaknesses (if any).

3) Develop and know how to correct known deficiencies.

Initial assessment is a process of assessing performance carried out by the organization systematically based on the work assigned to someone. Another opinion states that valuation is a systematic process to assess employee behavior in specific work that will be the basis of policy setting and development [17]. Effective performance assessment not only evaluates a person's ability, but also evaluates the opportunities he has. To measure the performance achieved during the specified period, the factors that form the basis of the assessment and approaches and methods are used as a tool to measure performance.

In performance appraisal, there are several types of criteria that can be assessed. There are six main performance criteria that can be assessed, namely: quality, quantity, timeliness, cost effectiveness, supervision and interpersonal influence [18]. Of the six criteria above there are three important criteria, namely, quality, effectiveness, and timeliness and the most important factors are quality factors, which can be competitive alternatives in the era of globalization [18]. Performance assessment is carried out to achieve a goal [17]. According to experts, the purpose of performance appraisal is to provide performance information that can be used to reward, train and develop and plan human resources. Performance assessment has two main objectives that can be seen from the interests of the organization and employees.

2.2 Employee Selection

Selection is one of the operational functions of human resources management related to employee procurement [16]. Selection is the first and foremost function of other functions in human resources management. It is said the first function because the selection is the initial stage before the other stages are carried out while the main function means that the error that occurs this function will have a long-term impact for the company. The selection function is a process that consists of several stages, namely: job analysis, human resources planning, testing, recruitment and placement. The selection process is a process used to make a decision on which prospective employee or applicant will be accepted. The process begins with compiling job details and ends with the decision of the prospective employee or applicant received.

Selection is the stage that determines whether or not someone is accepted and then appointed to a certain position according to his area of expertise [19]. It is described that the selection process made and adjusted to meet the employees needs from company [20]. The selection function will determine the quality, quantity, source of recruitment, testing methods and placement of new employees who follow the concepts of the right man in the right place and the right man in the right job. The meaning is the selection process carried out aimed at ensuring an employee occupies the right position or job.

2.3 Determinant for Success from Information System Application

Adoption and diffusion of information technology is a subject that has been widely studied in various disciplines such as: social science, marketing, engineering and management in general. This is done to explain the flow of information, ideas, practices, products, and services across cultures and sub-cultures or market segments. For example, one study explains the diffusion of technology that can identify relative advantages, conformity with values, convenience, experience and the ability to use information technology that influence adoption activities [21]. Subsequent research provides empirical support for suitability, relative benefits and convenience in the use of information technology [22]. On the other hand, in the information technology literature, one of the most prominent frameworks of the impact of information technology includes three stages of use namely: automation, information, and transformation [23].

The framework for the impact of information technology develops at each stage but must always be developed so that technology can be accessed or exploited. There is a lot of research on the application of information technology, which covers a variety of disciplines and different focus at both organizational and individual levels. In the theory of information technology diffusion, one study proposes that the adoption of information technology is a process of reducing uncertainty and information [21]. Theories about information technology namely: the individual's decision to adopt or not adopt is influenced by five key perceptions, namely: relative benefits, value conformity, convenience, experience and ability to use it.

2.4 Theoretical Models and Research Roadmaps

The model described below is a theoretical model and the research road map will be carried out based on relationships between variables as discussed in the previous section.

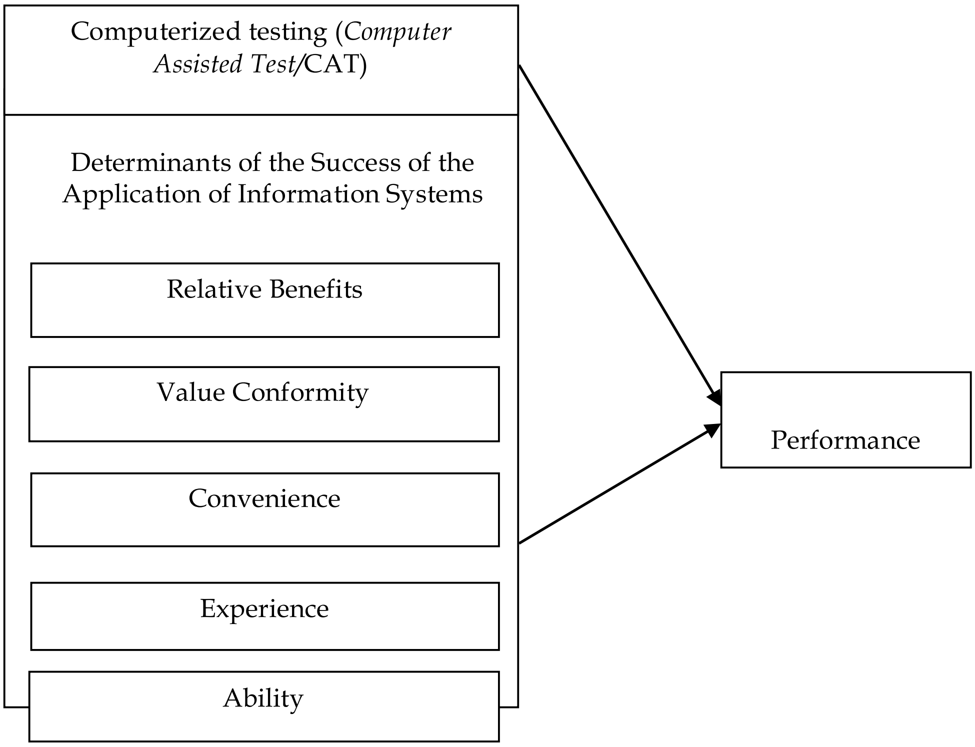

Figure 1. Theoretical Model and Research Roadmap

H1: Use of a computerized employee testing method (CAT) has a positive and significant effect on employee performance.

H2: The determinants of the success of the application of information systems have a positive and significant effect on employee performance.

3. Research Method

3.1 Research Design

This research included survey research using a questionnaire as a primary data collection tool and using a quantitative approach. The research method used is causal research. The main purpose of causal research is to obtain evidence or test hypotheses regarding causal relationships, and make conclusions about causal relationships between variables [24]. Causal research is a research approach in which researchers investigate the cause and effect relationship between variables in a study in which one variable is believed to affect the other.

3.2 Population and Sample

The population in this studies were all civil servants who served in the service in the West Sumatra provincial government. The latest data obtained about the number of civil servants serving in the service in the West Sumatra government environment are: 21,000 people. To get data, researchers took samples from the population using a sampling method, namely: purposive sampling, namely sampling from the population based on specific criteria or characteristics. The criteria used as the basis for the selection in this study are civil servants who go through the selection process to become candidates for civil servants (CPNS) through testing with a computerized method or CAT. Testing with this method has been carried out for the CPNS selection process since 2013. After classifying the population in this study using these criteria, the number of samples used in this study is 270 employees with a sample of 10% based on Issac and Michael's table (2013).

3.3 Data Collection Techniques

Data collection techniques used in this study were the distribution of questionnaires to respondents directly. While the steps taken in collecting the data are:

1. Formulate research problems and determine research objectives.
2. Determine the concepts and hypotheses and study the literature.
3. Determine the sample and population.
4. Prepare a questionnaire.
5. Trial questionnaire.
6. Test the validity and reliability of the questionnaire.
7. Distribution of questionnaires to respondents after the trial phase.
8. Data processing.
9. Analysis and reporting.

3.4 Research Variables and Variable Measurements

To determine the data that supports this research activity, it is important to explain about the operationalization of the variables used. The purpose of this study was to determine the influence of the computerized method (CAT) test and the determinants of the success of the information system on the performance of civil servants in the West Sumatra provincial government.

Table 1. Operationalization of Variables

No.	Variable	Sub-variable	Scale
1.	The testing method that utilizes technological advances namely computerized testing methods is the use of computers as a means to assess the competency of candidates or prospective employees (Robbins and Judge, 2013).	Validity Reliability	Interval
2.	Determinants of the Success of the Application of Information Systems is the extent to which information technology is perceived to be better than the activities carried out previously (Rogers, 2003)	Relative advantage, suitability, ease, experience, ability	Interval

3.5 Data Analysis

The structured questionnaire was used in this study to collect data from selected civil servants as samples who were assigned to all agencies / institutions within the West Sumatra provincial government. The questionnaire is divided into several parts, namely: testing with a computerized method (CAT), the determinants of the success of using the information system and input / suggestions.

Data processing is done using the latest SPSS to find out the relationship between variables in this study. Before testing the hypothesis, the research instrument was tested, namely the validity and reliability test to find out whether the questions in the questionnaire were valid and reliable. Furthermore, classical assumptions are tested to ensure that the research data is normally distributed because multiple linear regression analysis requires that data that can be processed is normally distributed data.

3.6 Research Indicator and Output

Based on theoretical models and research roadmaps above, the indicators of results achievement and research output are:

1. Partial or individual testing of independent variables, namely the computerized testing method (CAT) and critical success factors for the application of the information system. The data analysis method used is SEM using PLS.
2. Output resulting from this study are: a full report of the results of research, articles of research results and publication of research results.

4. Results and Discussion

4.1 Equition of Multiple Linear Regression

To find out the form of the relationship between the independent and dependent variables in this study, multiple linear regression analysis was carried out as described in the Table 1.

Table 1. The Result of Multiple Linear Regression Analysis from Variable X to Y

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	.388	.192	
	Relative Benefits	.005	.060	.005
	Value Conformity	.911	.074	.834

The Table 1 shows that the coefficients of B1 and B2 are positive, which means that there is a direct or positive relationship between the independent variable and the dependent variable. This means that if there is an increase in testing and the determinants of success in the implementation of information systems will improve employee performance and vice versa

Table 2. The Result of Multiple Linear Regression Analysis from Variable X2 to Y

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	.320	.179	
	Relative Benefits	.003	.045	.003
	Value Conformity	.218	.057	.248
	Convenience	.265	.043	.327
	Experience	.144	.048	.168
	Ability	.296	.051	.329

Data processing in the table above shows that the coefficient B of the five independent variables used is positive, which means that there is a direct or positive relationship between the independent variable and the dependent variable. This means that if there is an increase in testing and determinants of the success of the application of information systems such as: relative profits, suitability of value, convenience, experience and ability will improve employee performance and vice versa.

4.2 Coeficient of Determination (R^2)

The coefficient of determination is used to determine the contribution of independent variables to the existence of the dependent variable.

Table 3. Coeficient of Determination (R^2)

Model	R	R Square	Adjusted R Square
1	.838[a]	.702	.698

Table 3 shows the coefficient of determination or adjusted R^2 of 0.698 or 69.8%, meaning that the independent variable in this study consisting of testing and the determinants of the success of the application of information systems is able to explain the performance variable of 69.8%, while the remaining 30, 2% is explained by other variables not used in this study.

4.3 T Test

This test is conducted to determine the effect of the independent variables on the dependent variable described in the research hypothesis.

Table 4. Test of Variables X1 and X2 against Y

Model		t	Sig.
1	(Constant)	2.028	.044
	Relative Benefits	.081	.936
	Value Conformity	12.324	.000

Table 4 shows that the significance values for computerized testing variables are greater than alpha (0.936> 0.05), then Ho is accepted and Ha is rejected. This means that there is no positive and significant influence between computerized testing (X1) on Employee Performance (Y). Therefore, the first hypothesis which states that computerized testing has a positive and significant effect on employee performance is rejected. While the significance value for the variables that determine the success of the application of the information system is smaller than alpha (0,000 <0,05), then Ho is rejected and Ha is accepted. This means that there is a positive and significant influence between the determinants of the success of the application of information systems with employee performance.

Table 5 shows that the determinants of the success of the information system consisting of suitability of value, convenience, experience and ability have a significance value of 0.000-0.003, far below the tolerance level used which is 5% (alpha = 5%) or with a significance value of 0,000-0,003 smaller than 0.05. This means that Ho is rejected and Ha is accepted, which means there is a positive and significant influence of each of these factors on the performance of employees in civil servants in the government of the province of West Sumatra.

Table 5. T Test of Variable X2 against Y

Model		t	Sig.
1	(Constant)	1.786	.076
	Relative Benefits	.056	.956
	Value Conformity	3.838	.000
	Convenience	6.144	.000
	Experience	3.017	.003
	Ability	5.847	.000

As for the relative benefits, the significance value is far above 0.05 (0.956> 0.05), so Ho is accepted and Ha is rejected, which means that the relative benefits of using information systems do not have a positive and significant effect on the performance of employees in civil servants in the West Sumatra provincial government. Testing the hypothesis that has been done can be concluded in Table 6.

Table 6. The Hypothesis Testing

Hypothesis	Statement of Hypothesis	Result
H1	The use of computerized employee testing methods (CAT) has a positive and significant effect on employee performance.	Not Supported
H2	The determinants of the success of the application of information systems have a positive and significant effect on employee performance.	Supported

The two hypotheses proposed in this study are only one which is supported by empirical evidence through hypothesis testing that has been done. The first hypothesis states that the use of computerized employee testing methods (CAT) has a positive and significant effect on employee performance is not supported because the significance value obtained is greater than alpha after data processing is done. The second hypothesis which states that the determinants of the success of the application of information systems have a positive and significant effect on employee performance is supported where after being tested empirically proven. For the determinants of the success of the application of information systems, only one does not have a positive and significant effect, namely the relative benefits, while other factors positively and significantly determine the success of the application of information systems in the selection process in the West Sumatra provincial government.

5. Conclusion, Implication and Suggestions

5.1 Conclusion

The conclusions from the research that has been done based on the analysis and discussion in the previous section are:

1. The use of computerized employee testing methods (CAT) does not have a positive and significant effect on employee performance. This means that the performance of employees in the government of the West Sumatra province is not influenced by a computerized selection system.
2. Determinants of the success of the application of information systems have a positive and significant effect on employee performance. This means that in the selection process conducted by a computerized system, employees feel that many factors contribute to their success in undergoing the selection process by utilizing information technology.
3. Relative benefits do not have a positive and significant effect on the use of computerized employee testing methods (CAT) in the West Sumatra provincial government. Employees who have used information systems in testing employees do not feel any benefits and benefits to their work compared to the previous testing method.
4. Suitability values has a positive and significant effect on the use of computerized employee testing methods (CAT) in the West Sumatra provincial government. The value adopted by employees in the government of the West Sumatra province is in accordance with the information system that has been implemented in order to improve the efficiency and effectiveness of the selection activities.
5. Ease has a positive and significant effect on the use of computerized employee testing methods (CAT) in the West Sumatra provincial government. The understanding and use of information systems for employees in the West Sumatra provincial government is not too difficult in practice.
6. Experience has a positive and significant effect on the use of computerized employee testing methods (CAT) in the West Sumatra provincial government. Experience in carrying out work and using information systems for employees has a positive impact on employees because it makes it easier to implement information systems.
7. Capability has a positive and significant effect on the use of computerized employee testing methods (CAT) in the West Sumatra provincial government. Employees are not affected by the success or ability of others in using information systems.

5.2 Implication and Suggestion

Based on the data analysis and discussion presented earlier, the implication submitted are:

1. The West Sumatra provincial government must evaluate the use of computerized testing methods that have been implemented because it does not affect employee performance.
2. Computerized testing carried out can still be carried out by adjusting it to the needs or characteristics of the work that will be occupied by the employee.
3. For next research can usingdifferentsamplesfromothercompaniesornon-profitorganizations.
4. Next research can make model with mediation or moderation variables.

References

[1] J. W. Situmorang, *Menguak Iklim Investasi Pasca Krisis*. Jakarta: Erlangga, 2011.

[2] S. Sembiring, *Hukum Investasi Pembahasan Dilengkapi dengan Undang-Undang Nomor 25 Tahun 2007 Tentang Penanaman Modal*. Bandung: Nuansa Aulia, 2007.

[3] H. Salim and B. Sutrisno, *Hukum Investasi Indonesia*. Jakarta: PT. Raja Grafindo Persada, 2012.

[4] G. Kunjana, "Relaksasi DNI," *Investor Daily Indonesia*, Nov. 29, 2018. https://investor.id/archive/relaksasi-dni (accessed Sep. 08, 2019).

[5] P. M. Marzuki, *PPenelitian Hukum*, 12th ed. Jakarta: Penerbit Kencana, 2016.

[6] A. Ilmar, *Aminuddin Ilmar, 2010, Hukum Penanaman Modal di Indonesia, Kencana, Jakarta, p 120*. Jakarta: Kencana, 2010.

[7] S. Suhardi, *Hukum Koperasi Usaha Mikro, Kecil, dan Menengah di Indonesia*. Jakarta: Akademika, 2012.

[8] R. Fitriati, *Menguak Daya Saing UMKM Industri Kreatif*. Jakarta: Yayasan Obor, 2015.

[9] S. Sulistiowati and P. Paripurna, "Mempertahankan Tujuan Investasi Dalam Mengendalikan Dominasi Kepemilikan Asing," *J. Din. Huk.*, vol. 14, no. 2, 2014.

[10] B. Baedhowi, "Revitalisasi Sumber Daya Operatur dalam Rangka Meingkatkan Kualitas Layanan Publik," *J. Ilmu Adm. Dan Organ. Bisnis Dan Birokrasi*, vol. 15, no. 2.

[11] B. K. Suthar, T. L. Chakravarthi, and S. Pradhan, "Impacts of Job Analysis on Organizational Performance: An Inquiry on Indian Public Sector Enterprises," *Procedia Econ. Finance*, vol. 11, pp. 166–181, Jan. 2014, doi: 10.1016/S2212-5671(14)00186-5.

[12] V. Maltezou and G. Johnes, "It's been a long time: an analysis of job duration in two banks," *Evid.-Based HRM Glob. Forum Empir. Scholarsh.*, vol. 1, no. 2, pp. 130–146, Jan. 2013, doi: 10.1108/EBHRM-08-2012-0009.

[13] I. Troshani, C. Jerram, and S. Rao Hill, "Exploring the public sector adoption of HRIS," *Ind. Manag. Data Syst.*, vol. 111, no. 3, pp. 470–488, Jan. 2011, doi: 10.1108/02635571111118314.

[14] I. Altarawneh and Z. Al-Shqairat, "Human Resource Information Systems in Jordanian Universities," *Int. J. Bus. Manag.*, vol. 5, no. 10, p. p113, Sep. 2010, doi: 10.5539/ijbm.v5n10p113.

[15] S. D. Gardner, D. P. Lepak, and K. M. Bartol, "Virtual HR: The impact of information technology on the human resource professional," *J. Vocat. Behav.*, vol. 63, no. 2, pp. 159–179, Oct. 2003, doi: 10.1016/S0001-8791(03)00039-3.

[16] S. P. Robbins and T. Judge, *Organizational Behavior*. New Jersey: Pearson Prentice Hall, 2013.

[17] J. Wungu, *Tingkat kanKinerja Perusahaan Anda dengan Merit System*. Jakarta: Pt. Raja Grafindo Persada, 2003.

[18] R. A. Noe, J. R. Hollenbeck, P. M. Wright, and B. Gerhart, *Human Resources Management: Gaining a Competitive Advantage*, 7th ed. Singapore: McGraw-Hill International.

[19] H. Siagian and E. Cahyono, "Analisis Website Quality, Trust dan Loyalty Pelanggan Online Shop," *J. Manaj. Pemasar.*, vol. 8, no. 2, Art. no. 2, Sep. 2014, doi: 10.9744/pemasaran.8.2.55-61.

[20] H. Simamora, *Manajemen Sumber Daya Manusia*. Yogyakarta: STIE YKPN, 2004.

[21] E. M. Rogers, *Diffusion of Innovations*. New York: The Free Press, 2003.

[22] L. G. Tornatzky and K. J. Klein, "Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings," *IEEE Trans. Eng. Manag.*, vol. EM-29, no. 1, pp. 28–45, Feb. 1982, doi: 10.1109/TEM.1982.6447463.

[23] D. Remenyi, A. Money, and A. Twite, *A Guide to measuring and managing IT benefit*. Manchester: NCC Blackwell, 1991.

[24] V. Kumar and D. Shah, "Building and sustaining profitable customer loyalty for the 21st century," *J. Retail.*, vol. 80, no. 4, pp. 317–329, Jan. 2004, doi: 10.1016/j.jretai.2004.10.007.

2

The Role of Gastronomic Tourism Education in Sustaining Malaysian Heritage Food

Mohd Nor Ahmar bin Mohd Sanip[1a], Ramlee Mustapha[2]

[1]Fakulti Sains Sosial dan Kemanusiaan, Kolej Universiti Tunku Abdul Rahman, Malaysia
[2]Fakulti Teknikal dan Vokasional, Universiti Pendidikan Sultan Idris, Malaysia

[a)] Corresponding author: nor@tarc.edu.my

Abstract

Recognizing the prospective of Malaysian heritage food as a great tool in marketing Malaysia as a haven for a gastronomic tourism destination, tourism authorities in Malaysia have taken courageous steps in consolidating various strategies to showcase the uniqueness of Malaysian heritage delicacies. Although the strategy has successfully introduced Malaysian food to the food aficionados and foreign visitors, the sustainability of Malaysian heritage delicacies is still questionable. This paper aims to explore the role of gastronomic tourism education in sustaining Malaysian heritage food. Additionally, the types of Malaysian heritage food are highlighted while the strategies taken by Malaysian tourism authorities in preserving the heritage food are recognized.

Keywords: Malaysian heritage food; sustainable development; gastronomic tourism education; sustainability; Malaysia.

1. Introduction

As the utmost elements in the tourism sector, food does not only acts as a medium of attraction for tourists who seeks unusual or extraordinary gastronomic experiences [1; 2; 3; 4] but at the same time is regarded as an important means in selling the identity and culture of a destination [5; 6]. The local delicacies that are offered to the tourists would contribute to the popularity of the destination and the food served can be looked as a "gastronomic symbol" that represents the destination.

For instance, the authentic food culture of pizza and pasta which was attached to the European countries such as France and Italy [7], or the authentic handmade udon noodles, which is a signature dish of Japan [8] can be regarded as a gastronomic symbol that may encourage people to travel to such areas to sample them [9; 10]. This travel act, which is characterized by the visitor's experience linked with food and related products or gastronomic tourism [11], has become one of the most valued sectors in the tourism industry [12].

As a niche part of the tourism industry, gastronomic tourism is considered as an important tool in enriching the experiences of the tourists either from the aspects of food culture and traditions [13; 14; 20], authenticity of delicacies [2; 16; 17], the different usage of ingredients in recipes as well as methods of preparation [18; 19]. [13] for example asserted that by consuming local foods, tourists are able to understand the identities and ethnicities of a certain people within a given destination. [20] on the other hand suggested that as an essential part of cultural tourism, the food experiences is recognized as an expression of identity and culture, in which the tourists will assimilate with when consuming the food. Moreover, through the consumption of local food products, it enables the tourists to experience excitement, education, different lifestyles, education as well as satisfaction [21; 15].

In the context of gastronomic tourism sustainability, [23] contended that, "gastronomy studies add a missing perspective to the quest for sustainable tourism". [23] also added that "the impact of tourism on gastronomy sustainability of communities is an issue of 'food security, which today is not only predicted on pestilence, famine and conflict' [22] but pertains among the other things, to trade, food processing, retailing, human behaviors and food choice, and all traditional components of gastronomy [22].

In recent years, a growing emphasis has been placed on the topic of sustainability in food, particularly heritage food. Due to globalization and lifestyle changes, the usual dining pattern; from eating at home to frequenting food outlets, has changed the landscape of food preparation and consumption. In Malaysia, the typical dining habit of eating at home is gradually decreasing due to these social transformations caused by urbanization and globalization [24]. As a result, the aesthetic values of Malaysian heritage food were affected by the methods of preparations, traditional servings, or the usage of ingredients. Additionally, the authentic taste and the presentation of the heritage food might be modernized to suit the latest food trends. With the rapid mushrooming of the fast food outlets, and the introduction of varieties of pre-packed convenient food, not only will the heritage food be neglected, but it will also cause the community to forget to preserve their special heritage delicacies [24].

Responding to these issues, there is a crucial need to explore the role of gastronomic tourism education in sustaining Malaysian heritage food. Additionally, the types of Malaysian heritage food should also be recognized as there is an array of delicacies that can be inherited from the three main ethnic groups in Malaysia and other indigenous sub-ethnic groups. Last but not least, the strategies taken by the tourism authorities to preserve Malaysian heritage food should be investigated, as the strategies will determine the longevity of the heritage food for benefits of future generations.

2. Literature Review

2.1 Gastronomic Tourism Education

In recent years, there has been an increasing amount of literature on the topic of gastronomic tourism [7; 13; 14; 15). Respective scholars have emphasized the importance of gastronomy in tourism as a key motivation for tourists to travel [1; 9; 10; 26], while others pointed out that gastronomic tourism allows the tourists to gained new experiences, excitement, escapism, status, education, and lifestyle [27; 28]. As a subset of cultural tourism, the basic ingredients of modern gastronomic tourism include a close relationship with cultural and agricultural tourism, chefs, media and tourism providers, catering services, attractions, tourism services government regulations, public awareness, food image, promotion and marketing, as well as education [29].

According to [30], it is important to recognize the differentiation between gastronomy as a practice and the study of gastronomy. As a practice, gastronomy refers to the application of the advice and guidance and the exercise of skills and knowledge, which together might be regarded as constituting an art of living [30]. For the study of gastronomy, the scope of the study extends to the production and preparation of food, and therefore the study of gastronomy relates to the production of food, and the means by which foods are produced; the political economy of food; the treatment of foods, their storage and transport and processing; their preparation and cooking; meals and manners; the chemistry of food, digestion, and the physiological effects of food; food choices and customs and traditions' [31].

Extrapolating from the work of [30; 31] and the definition of gastronomic tourism by World Tourism Organization, for this study gastronomic tourism education can, therefore, be defined as a program or programs which emphasize on the way a gastronomic destination prepares the skilled workforce to be able to work professionally in the developing gastronomic tourism sectors. Additionally, the program contents are developed to promote the training, general knowledge from theoretical and technical, vocational skills and cultural beliefs of individuals in a community or other given tourists' destination areas. These programs may be conducted through various tertiary institutions, including technical and vocational schools, community colleges, university colleges and universities.

2.2 Sustainable Gastronomy and Tourism

In order to understand the relationship between sustainable gastronomy and tourism, one must acknowledge the definition and the development of sustainable tourism. The term 'sustainability tourism' has become a popular topic of interest since the late 1980s [32]. Derived from the concept of "sustainable development" which was introduced as a policy consideration in order to combat some of the environment problems by the World Conservations Strategy by the International Union for the Conservation of Nature and Natural Resources (IUCN, 1980), the term has been generally adopted in the literature as a key term and concept by both researchers and practitioners [32].

According to World Tourism Organization (2019), sustainable tourism can be defined as "tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities". Within the perspective of gastronomy, gastronomic tourism can be looked at as a key important issue in the subject of tourism sustainability [22]. According to [22], sustainable gastronomy implies that communities can evolve socially and economically while maintaining an eco-nutritional commitment to environmental sustainability and the optimal health of community members. In this case, the interactions between the gastronomic tourism providers, such as local food producers who prepare the local delicacies that is environmentally safe that nourish both body and mind of the tourists, will create a system that reflects sustainability gastronomy [22].

2.3 Malaysian Heritage Food

As one of the countries in South East Asia which is well known for its multi-ethnic, multi-cultural and multilingual society comprises of Malay, Chinese, Indians and other sub-ethnic groups, Malaysia is blessed with vast gastronomic products that can be offered to international tourists [33]. The harmonious relationship between the ethnicities has formed unique gastronomic products with diverse flavours ranging from mild to spicy and plain to sweet, resulting from various ingredients [33; 34]. Additionally, the ways the food and beverages were served, types of equipment used, the selection of ingredients and the styles of cooking, which is different for each ethnic group, have become part and parcel of the Malaysian gastronomic products which makes it more fascinating [33]. Therefore, it is not surprising that the country has become a food-haven destination for gastronomic travellers [35; 36; 33].

The colourful cultures and history of Malaysia have become a platform for the rise of Malaysian heritage food. According to [37], food heritage is related to the origin of the food products and food production of local produce. In the context of Malaysia, Malaysian heritage food has been redefined as the typical local cuisines that are embedded with cultural values that symbolize the lives, culture, and heritage value of the country's multiracial community [24; 38]. Additionally, the Heritage Commissioner of the National Heritage Department, Prof. Datuk Zuraina Majid, states that food heritage in Malaysia can be segregated into two categories. The first category refers to synonymous or common foods that are part of the local community lives, while for the second category emphasized almost extinct food or, in other words, food that used to be parts of the culture but is slowly dying out [40; 41].

3. Research Method

As this study seeks to explore the role of gastronomic tourism education in sustaining Malaysian heritage food, the primary data was acquired by reviewing and analyzing the program contents of hospitality and tourism programs offered by the public and private tertiary higher institutions in Malaysia. The sample comprised of a program structure from one public university and two program structures from two private colleges university, as shown in Table 1. In identifying the types of Malaysian heritage food and the strategies taken by authorities in sustaining the delicacies, extensive reviews were conducted on various resources, including journals, tourism brochures, newspapers clipping, and relevant government websites.

Table 1. Program Structure

No.	Types	Website
1.	Public University	https://fhtm.uitm.edu.my/images/academic_affair/programme/diploma/Culinary_Arts_Management.pdf
2.	Private College University 1	http://klmuc.edu.my/course/diploma-in-culinary-arts/
3.	Private College University 11	https://www.berjaya.edu.my/university/faculty-of-culinary-arts/diploma-in-heritage-cuisine/

For all of the data collected, a content analysis method was performed on the relevant sources. Content analysis is the most commonly used method in analyzing the aspects of culture or place within marketing materials [42]. This type of analysis allows the researcher to understand the theoretical and conceptual issues relating to the data [43].

What is the role of gastronomic tourism education in sustaining Malaysian heritage food, and what kind of food has been listed as Malaysian heritage food? What are the strategies taken by the tourism authorities in ensuring the longevity of Malaysian delicacies? The following paragraphs attempts to provide the answers related to the questions which have been highlighted previously in the introduction section.

3.1 The Importance of Malaysian Heritage Cuisine Courses in Sustaining Malaysian Heritage Food

From the extensive analysis conducted on three different hospitality and tourism program structures of Malaysian tertiary institutions, it was discovered that there is a lack of focus given to the gastronomic tourism education course in the Malaysian hospitality education program. However, since gastronomy shared the same umbrella with culinary arts, it can be suggested that for this study, the gastronomic tourism education can be associated with culinary arts education program, emphasizing on the practical and theoretical gastronomy aspects.

From the review of the culinary arts programs from three different tertiary institutions, it was found that the course related to Malaysian heritage food was included in the diploma and degree program contents. The subject, which has different titles depending on where it was offered, is a combination of both theoretical and practical classes. In these courses, students are not only exposed to the fundamental concepts, skills and techniques of preparing Malaysian heritage food, but the knowledge on the history and distinctive cultural influences of each delicacy is also stressed through the students' involvement in the preparation of the food.

In a program offered by a well-known faculty in hospitality and tourism management at Malaysian public university, the exposure to the Malaysian heritage food is conducted through the course entitled Malaysian cuisine. The course which was offered in the program structure of Degree in Culinary Arts Management was segregated into two semesters, in particular semester three and semester four. In this course, students are exposed to the various types of predominant ethnic food of the Malay, Chinese and Indian, and other indigenous ethnicities in Malaysia. Additionally, through the practical class, which includes mise-en-place, preparation, cooking and plating of the food, the students are also familiarized with the local ingredients which act as the backbone for Malaysian heritage food. A similar type of course was offered in one of the two private tertiary institutions in this study. In comparison to the public university program that offered the Malaysian Cuisine course for two semesters, this private institution only offers the subject of Malaysian cuisine for one semester, particularly in semester six.

Interestingly, instead of offering the Malaysian Cuisine subject as content in a culinary arts program, another private tertiary institution comes with the idea of a Diploma in Heritage Cuisine. The program which was designed for a two-year study duration, is meant for prospective students interested in understanding and appreciating Malaysian heritage cuisine. Apart from the basic culinary techniques and theories, the program also includes analyses on the history, as well as the cultural influence of each ethnic, have on their food heritage. This is important as Malaysian food culture and its traditional preparations are practiced according to the culture, beliefs and values of its people, as asserted by [24]. Additionally, the introduction of Halal food preparation in the program structure has shown the awareness of the university in lieu of the new paradigm in emerging global issues on sustainability, environmental, food safety and animal welfare [44]. Moreover, the inclusion of Asian Kuih and Dessert course also demonstrates the institutions' efforts to preserve the national food treasure of Malaysia.

3.2 Malaysian Heritage Food Listing

In view of Malaysian heritage food listing, the study discovered that in December 2009, the Department of Heritage Malaysia (DHM) under the Ministry of Tourism and Culture has taken a bold step in preserving the Malaysian gastronomic heritage by releasing a list of 100 Malaysian Heritage Food List [19; 39]. The list was expanded to 151 in the year 2013 [19; 38] and by the year 2018, about 195 types of Malaysian heritage food was listed [38]. Table 2 displays the list of Malaysian heritage food according to the National Heritage Department.

Table 2. Malaysian Heritage Food Listing

Malaysian Heritage Food							
1	Nasi Lemak	26	Serunding	51	Hinava	76	Pisang goreng
2	Nasi Ayam	27	Ayam Percik	52	Pekasam	77	Keropok
3	Pulut Kuning	28	Manok Pansuh	53	Tempoyak	78	Opok-opok
4	Nasi Tumpang	29	Asam Pedas	54	Otak Otak	79	Karipap
5	Nasi kerabu	30	Gulai Tempoyak Ikan Patin	55	Sambal Belacan	80	Ondeh ondeh
6	Nasi Dagang	31	Ikan Bakar	56	Cencaluk	81	Lempeng
7	Nasi himpit	32	Ikan Panggang Tanah Liat	57	Sambal Gesek Ikan Bilis	82	Bahulu
8	Nasi Goreng Kampong	33	Gulai Lemak Umbut	58	Satay	83	Dodol
9	Nasi Ulam	34	Gulai Lemak Cili Padi	59	Yee Sang	84	Lempok Durian
10	Ketupat	35	Gulai Asam Rom	60	Sata	85	Wajik
11	Lemang	36	Kari Kepala Ikan	61	Telur Pindang	86	Seri Kaya
12	Pulut Kukus Periuk Kera	37	Kurma Daging/ Ayam	62	Kerabu Mangga Muda	87	Halwa
13	Mee Mamak	38	Pajeri	63	Acar	88	Agar-agar
14	Laksa	39	Masak Ikan dan Pisang Dalam Buluh	64	Kuih Keria	89	Pulut Panggang
15	Mee Kari	40	Yong Tau Foo	65	Kuih Koci	90	Tapai
16	Char Kuey Teow	41	Daging Dendeng	66	Akok	91	Masalodeh
17	Laksa Johor	42	Ayam Panggang	67	Kuih Bingka	92	Putu Mayam
18	Mee Siam	43	Botok- Botok ikan	68	Kuih Seri Muka	93	Maruku
19	Bubur Pedas Sarawak	44	Sambal Tumis	69	Kuih Cara	94	Roti Jala
20	Bubur Assyura	45	Chili Crab	70	Kuih Bakul	95	Roti Canai
21	Bubur Sum-sum	46	Teh Tarik	71	Kuih Bulan	96	Tosai
22	Bubur Kacang Hijau	47	Cendol	72	Kuih Cincin	97	Penderam
23	Sagu Gula Melaka	48	Air Batu Campur	73	Kuih Bakar	98	Kuih Lopes
24	Bingka Ubi	49	Air Kelapa	74	Kuih Sepit	99	Laddu
25	Rendang	50	Air Selasih	75	Apam Balik	100	Ubi Kayu

[a.] Sources: National Heritage Department (Ellis, 2009)

3.3 The Role of Malaysian Food Campaign in Sustaining Malaysian Heritage Food

In addition to the releasing of 100 Malaysian Heritage Food List by the Department of Heritage Malaysia, there are other strategies, which was employed by Malaysian tourism authorities in ensuring the longevity of Malaysian Heritage Food. For example, in the "Fabulous Food 1 Malaysia" campaign which was launched in 2009 by Ministry of Tourism and Culture (MOTAC), three Malaysian cuisine annual promotional events which include "Malaysia International Gourmet Festival" or MIGF, "ASEAN Heritage Food Trail with Chef Wan" and "Street and Restaurant Food Festival" was organized specifically in promoting Malaysian cuisine as one of the country's tourist attractions [19].

Among the three food campaigns event launched, only the Malaysian International Gourmet Festival (MIGF) is still organized by the Ministry of Tourism and Culture and is currently running in the 18th consecutive years since the launching in 2001. Formerly known as the inaugural KL Gourmet Festival in 2001, the event debuted with only 13 restaurants during the early years. By 2003, the event changed its name to KL International Gourmet Festival (KLIGF) and in 2006, the event is known as Malaysian International Gourmet Festival. Throughout the years, a variety of dining programs, which showcase local and international cuisines was developed during the festival.

Another effort taken by the Malaysian government in sustaining Malaysian heritage food is through the launching of the “Malaysian Kitchen for the World” program. Launched in 2006, the ‘Malaysian Kitchen for the World’ program (MKP) was introduced by Malaysian government through the Malaysian External Trade Development Corporation (MATRADE) under the Ministry of International Trade and Industry (MITI). With the aim of increasing the interests of international consumers towards Malaysian heritage cuisine, the program also emphasizes inducing Malaysian cuisine to the world, increasing the exports of processed food, food ingredients, and agriculture to attract tourists to visit Malaysia [45; 46]. In order for the restaurateurs to be selected in the program, the food served in the restaurant must comply with the guidelines set by the Malaysian government; the food being served must be Malaysian food which is traditionally and customarily consumed by Malaysians [47]. By looking at the current expansion of the numbers of restaurants involved within the programmed, from 465 restaurants in 2010 to 647 restaurants in 2012 [45], the MKP has proven the ability of sustaining the economy through the utilization of Malaysian gastronomic products.

To put in a nutshell, at this preliminary stage, this study has shown the important role of gastronomic tourism education in sustaining Malaysian heritage food through the introduction of Malaysian cuisine subjects within the culinary arts program structure. Additionally, the list of Malaysian food heritage has been recognized based on the listing given by the National Heritage Department, and the strategies taken by Malaysian tourism authorities have also been highlighted. However, due to a few limitations, such as limited literature resources, time, and financial constraints, there is insufficient empirical evidence to support the result. Therefore, there is a need for future studies to be conducted empirically in supporting the results of this study.

Acknowledgment

The first author would like to specially thank second author for giving him the encouragement to write this paper. As ever, the interpretation offered in this paper is solely based on the authors alone.

References

[1] S. Quan and N. Wang, "Towards a structural model of the tourist experience: An illustration from food experiences in tourism." Tourism management, Vol. 25 No. 3, 2004, pp. 297-305.

[2] E. Cohen, and N. Avieli, "Food in tourism: Attraction and impediment." Annals of tourism Research, Vol. 31 No. 4, 2004, pp. 755-778.

[3] C. M. Hall, and M. Richard, "Gastronomic tourism: Comparing food and wine tourism experiences." Niche tourism. Routledge, 2007, pp. 87-102

[4] S. Kim, E. Park, and D. Lamb, "Extraordinary or ordinary? Food tourism motivations of Japanese domestic noodle tourists." Tourism Management Perspectives, Vol. 29, 2019, pp. 176-186.

[5] J. Kivela, and J. C. Crotts, "Gastronomy tourism: A meaningful travel market segment." Journal of Culinary Science & Technology, Vol. 4 No. 2-3, 2005, pp. 39-55.

[6] B. Okumus, F. Okumus, and B. McKercher, "Incorporating local and international cuisines in the marketing of tourism destinations: The cases of Hong Kong and Turkey." Tourism management, Vol. 28 No. 1, 2007, pp. 253-261.

[7] J. C. Henderson, "Food tourism reviewed." In S. Seo, O.Y. Kim, S. Oh, & N.Yun, (2013). Influence of informational and experiential familiarity on image of local foods. International Journal of Hospitality Management, 34, 2009, pp. 295–308.

[8] S. Kim, and E. Park. "What Matters to Japanese Udon Noodle Tourists? A Phenomenological Approach." Food Tourism in Asia. Springer, Singapore, 2019, pp. 157-169.

[9] S. Kim,, and C. Iwashita. "Cooking identity and food tourism: the case of Japanese udon noodles." Tourism Recreation Research, Vol. 41 No. 1, 2016, pp. 89-100.

[10] S. Kim, and A. Ellis. "Noodle production and consumption: From agriculture to food tourism in Japan." Tourism Geographies, Vol. 17 No. 1, 2015, pp. 151-167.

[11] World Tourism Organization & Basque Culinary Center, Guidelines for the Development of Gastronomic Tourism 2019. UNWTO: Madrid. DOI: https://doi.org/10.18111.9789284420957 [Accessed May 28,2019]

[12] J. M. Aizega, Guidelines for the Development of Gastronomic Tourism: Foreword Basque Culinary Center 2019. UNTWO: Madrid.

[13] R. J. Harrington, and M. C. Ottenbacher. "Culinary tourism—A case study of the gastronomic capital." Journal of Culinary Science & Technology, Vol. 8 No. 1, 2010, pp. 14-32.

[14] Ab. Karim, B. L. Chua, H. Salleh, "Malaysia as a culinary tourism destination: international tourists' perspective" Journal of Tourism, Hospitality & Culinary Arts, Vol. 1 No. 3, 2009, pp. 1-16.

[15] R. Mitchell, C. M. Hall, E. Sharples, B. Cambourne, & N. Macionis, Food Tourism around the world: development, management and markets 2003.

[16] P. Björk, and H. Kauppinen-Räisänen, "Exploring the multi-dimensionality of travellers' culinary-gastronomic experiences." Current Issues in Tourism, Vol. 19 No. 12, 2016, pp. 1260-1280.
[17] A. Mak, M. Lumbers, and A. Eves. "Globalisation and food consumption in tourism." Annals of tourism research, Vol. 39 No. 1, 2012, pp. 171-196.
[18] R. Babolian Hendijani, "Effect of food experience on tourist satisfaction: the case of Indonesia." International Journal of Culture, Tourism and Hospitality Research, Vol. 10 No. 3, 2016, pp. 272-282.
[19] M. H. Jalis, D. Che, and K. Markwell. "Utilising local cuisine to market Malaysia as a tourist destination." Procedia-Social and Behavioral Sciences, Vol. 144, 2014, pp. 102-110.
[20] I. Cusack, "African cuisines: recipes for nation building?", Journal of African Cultural Studies, Vol. 13 No. 2, 2000, pp. 207-225.
[21] J. Kivela, and J. C. Crotts, "Understanding travelers' experiences of gastronomy through etymology and narration." Journal of Hospitality & Tourism Research, Vol. 33 No. 2, 2009, pp. 161-192.
[22] R. Scarpato, "Sustainable gastronomy as a tourist product." In Tourism and gastronomy, pp. 146-166. Routledge, 2003.
[23] R. Scarpato,"Gastronomy studies in search of hospitality." CAUTHE 2002: Tourism and Hospitality on the Edge; Proceedings of the 2002 CAUTHE conference. Edith Cowan Universty Press, 2002.
[24] S. R. Omar, and S. N. Omar. "Malaysian Heritage Food (MHF): A Review on Its Unique Food Culture, Tradition and Present Lifestyle." International Journal, Vol. 1 No. 3, 2018, pp. 01-15.
[25] G. Gheorghe, P. Tudorache, and P. Nistoreanu. "Gastronomic tourism, a new trend for contemporary tourism." Cactus Tourism Journal, Vol. 9 No. 1, 2014, pp. 12-21.
[26] Y.G Kim, and A. Eves. "Construction and validation of a scale to measure tourist motivation to consume local food." Tourism management, Vol. 33 No. 6, 2012, pp. 1458-1467.
[27] K. Fields, "Demand for the gastronomy tourism product: motivational factors." Tourism and gastronomy. Routledge, 2003.
[28] I. Frochot, "An analysis of regional positioning and its associated food images in French tourism regional brochures." Journal of Travel & Tourism Marketing 14.3-4, 2003, pp.77-96.
[29] E. Wolf, "Culinary tourism: A tasty economic proposition. Portland." 2002.
[30] B. Santich, "The study of gastronomy and its relevance to hospitality education and training." International journal of hospitality management 23.1 (2004): 15-24.
[31] B. Santich, "Sustaining Gastronomy." In: Proceedings of the Eighth Symposium on Australian Gastronomy: Sustaining Gastronomy, Adelaide, 28–30 September, 1994, pp. 1–2.
[32] M. Novelli, and A. Benson, "Niche tourism: A way forward to sustainability?" In Niche Tourism: contemporary issues, trends and cases. Routledge, 2005.
[33] M. H, Jalis., M. S. M. Zahari., M. I., Zulfifly and Z. Othman, "Gastronomic products as tourist motivational factors: An opportunity to Malaysia." In proceeding of the 2007 Tourism Educators of Malaysia Conference.
[34] W. Hutton, The food of Malaysia: authentic recipes from the crossroads of Asia. Singapore: Periplus, 2000.
[35] L. Tibere and M. Aloysius, "Malaysia as a food-haven destination: the vision and its sustainability. Asia-Pacific Journal of Innovation in Hospitality and Tourism, Vol. 2 No. 1, 2013, pp. 37-51.

[36] N. M. Yusoff, M. S. M. Zahari, M. Z. M. Kutut, & M. S.M. Sharif, “Is Malaysian food important to local tour operators?” Procedia-Social and Behavioral Sciences, Vol. 105, 2013, pp. 458-465.

[37] A. Ramli, M. S. M. Zahari, N. Ishak & M. M. Sharif, “Food heritage and nation food identity formation” Hospitality and Tourism: Synergizing Creativity and Innovation in Research, 2013, pp. 407.

[38] Department of Heritage Malaysia, “Makanan Warisan.” 2019, March 2. Retrieved from: http:// www. Heritage.gov.my/index.php/en/intangible-heritage/customs-a-culture/traditional-food

[39] S. Ellis, “Foreign Tourist not so into nasi lemak”. New Straits Times, 2009, May 11, pp. 24. Retrieved from http://www.nst.com.my/

[40] A. M. Ramli, M. S. M. Zahari, N. A. Halim & M. H. M. Aris, “Knowledge on the Malaysian Food Heritage.” Asian Journal of Quality of Life, 2017, Vol. 2 No. 5, pp. 31-42.

[41] N. A. Wahid, B. Mohamed & M. Sirat, “Heritage food tourism: bahulu attracts.” In Proceedings of 2nd National symposium on tourism Research: theories and applications, 2009, pp. 203-209.

[42] H. H. Kassarjian, and W. M. Kassarjian, "The impact of regulation on advertising: A content analysis." Journal of Consumer policy, Vol.11 No. 3, 1988, pp. 269-285.

[43] K. Krippendorff, "Reliability in content analysis." Human communication research, Vol. 30 No. 3, 2004, pp. 411- 433.

[44] R. Golnaz, M. Zainalabidin, S. Mad Nasir and E. Chiew, " Non-Muslims’ awareness of halal principles and related food products in Malaysia.”, 2010, pp. 667-67.

[45] N. Nahar, S. A. Karim, R. Karim, H. Ghazali & S. E . Krauss, “The globalization of Malaysia national cuisine: a concept of 'gastro diplomacy'.” Journal of Tourism, Hospitality and Culinary Arts, 2018, Vol. 10 No. 1, pp. 42-58.

[46] Bernama (2012). “M’sia Kitchen Programme spurs more M’sian restaurants in China,” Daily Express, October 19, 2012 [cited 2019 March 2]. Available from: http://www.dailyexpress.com.my/news.cfm? NewsID=82921

[47] R. Sae, “Malaysia’s Food Image: A Case of Malaysia Kitchen Programme (MKP) in Finland”, Master dissertation, 2015. Available from: https://esource.dbs.ie/handle/10788/2

Mohd Nor Ahmar Bin Mohd Sanip is a lecturer at the Department of Hospitality Management, Faculty of Social Science and Humanities, Tunku Abdul Rahman College University. Currently he is furthering his Doctor of Philosophy degree at Sultan Idris Education University under Technical and Vocational Education. His areas of interest include gastronomy, gastronomic tourism and hospitality education.

Prof. Dr. Ramlee Mustapha is a Professor of Technical and Vocational Education at the Faculty of Technical and Vocational, Sultan Idris Education University. He has written more than 100 articles and 7 books and is in the process of publishing “Eco-tourism in Indigenous community in Malaysia”. Prof. Dr. Ramlee has won several Gold and Silver medals for his invention in the academic world

3

In-Game Factors and Technology Acceptance Factors in Increasing Intention to Play Online Game

Wahyu Rafdinal[1a], Agri Qisthi[2]

[1]Department of Commerce, Politeknik Negeri Bandung, Bandung, Indonesia
[2]Economics Faculty, Universitas Andalas, Padang, Indonesia

[a)]Corresponding author: wahyu.rafdinal@polban.ac.id

Abstract

Online games are in great demand and even become leisure activities for many gamers. This study aims to analyse the factors of attitude towards playing online games that are influenced by factors that exist in online games (game features and trust in developers) and technology acceptance factors (perceived usefulness and perceived ease of use) on the intention to play online games, also analyse subjective norms in influencing intention to play online games. Respondents in this study are online game players in Indonesia with 250 respondents. The analysis technique used is PLS-SEM. The results showed that attitude toward playing online games and subjective norms had a significant effect on intention to play online games. Attitude toward playing online games is influenced by perceive usefulness, game features, and trust in game developers. But perceive ease of use does not have a significant effect on attitude toward playing online games.

Keywords: Perceived Usefulness, Perceived Ease of Use, Game Features, Trust, Attitude, Subjective Norm, Intention to Play

1. Introduction

Today, online games are in high demand and even become leisure for many gamers. Online gaming has emerged widely in the computer and cellular telecommunications industries. Mobile devices and social networks have become platforms for playing popular games. Online games are one type of entertainment-oriented and Internet-based information technology. Online games typically are multiplayer games that enable users to fantasize and be entertained [1]. With the development of mobile devices, particularly smartphones, playing online games in a mobile environment has become more and more popular as it extends the variance of place and time for users to play online games [2].

Intention to play is a function of trust in online game websites, attitude toward playing online games, online gaming enjoyment, and subjective norms [3]. This study aims to analyze the factors that influence intention to play online games; one of the effects is technology acceptance. To examine the intention to play online games, this study integrated and modified the technology acceptance model (TAM) [4] and the theory of reasoned action (TRA) [5]. TRA suggests that behavioral intention is a function of an individual's attitude toward the behavior and the individual's subjective norms. To adapt TRA to the online gaming context, we extend it with two critical constructs: trust and enjoyment [3]. Video games are characterized as entertainment-oriented information technology. Like any other information system, the factors contributing to users' acceptance of video games are essential [6].

One of the factors that influence intention is attitude. The higher attitude to play online games can increase the intention of playing online games. According to the Reasoned Action Theory, individuals' attitudes toward an object would influence their behavioral intentions [7]. Players' attitudes strongly determine their intention to play online games. Players with a more favorable attitude toward playing such games are more likely to accept and participate in them [8]. Attitude and intention to play mobile social games and help provide implications for successful gaming [2]. Many factors affect the attitude to play online games. This research analyses two main factors, such as acceptance factors technology and in-game factors.

Technology acceptance factors and in-game factors can influence attitude to play online games. Someone who plays online games has many reasons to play online games, such as technology acceptance factors (perceived usefulness and perceived ease of use) and factors in games (game features and in-game trust developers). It also can be influenced by attitude toward playing an online game and subjective norm. The use of TAM and TRA theories in this study is considered relevant in analyzing the intention to play online games. Perceived usefulness and perceived ease of use can affect the attitude that will affect playing intention [9]. Perceived ease of use, perceived usefulness, and perceived enjoyment are significantly associated with attitude and behavioral intention [6]. Understanding player intentions is an essential issue for game developers, marketers, and organizations. These various groups influence gamers' desire to play by taking into account the various factors that determine it. Perceived usefulness in online games such as enjoyment can affect intention to play online games [10]. Perceived usefulness in the game today can be leisure for gamers. Later it will affect the desire of gamers for leisure or visiting tourist attractions. Participating in leisure activity may reduce the pressure they receive from an unfamiliar environment [11].

Game features play an essential role in creating an attitude towards playing online games. There are several features contained in the game such as social features, manipulation and control features, narrative and identity features, reward and punishment features, dan presentation features [12]. Users are primarily interested in the appearance of the objects that they are clicking while playing an online game. The higher the level of the visual appearance, the more the users are attracted to the game, and the higher their level of enjoyment will be [10].

Famous game developers and in-game trust developers can influence attitude directly [2] or indirectly [3]. Online game developers and designers should reflect utilitarian and hedonic motivation issues in both the interface and functionality design and implementation of online games to attract more gamers [13]. Different people choose to play games for very different reasons, and thus, the same video game may have very different meanings or consequences for different players [14]. There are relationships between cooperative game features and intention is fully mediated by group norms, social identity, joint commitment, attitudes toward cooperation, and anticipated positive emotions [15].

Besides, social factors can influence someone in playing online games. People voluntarily help each other accomplish common missions and goals, strongly interact with one another to discuss in-game strategies and opportunities, share comprehensive knowledge about game contents in forums and wikis, and form groups that persist over time [15]. Having the opportunity to play, meet, challenge, and chat with other players worldwide increases the demand for online games [10]. Attitudes toward virtual goods are formed in social communities; the number of friends and social activities may be moderators [16]. Many internet users only play online games because their friends are online game players and recommend that they play [17].

The scope of this research is limited to the intention to play online games in Indonesia. Indonesia was chosen as a research site because Indonesia is one of the countries with the most online game players. Then this study analyses the effect of attitude towards playing online games and subjective norms on the intention to play online games. This research also revealed technology acceptance factors (perceived usefulness and perceived ease of use) and factors in the game (game features and in-game trust developers). This research organized as follows; the next section represents literature about the study variables and theories as well as the hypotheses development. Then we demonstrate our data collection and measurement. Finally, we explain the results, discussion, and managerial implications and demonstrate the limitations and future research.

2. Theory and Hypothesis Development

2.1 Technology Acceptance Factors

The technology acceptance model explains the determinants of information technology usage. Technology acceptance factors in this study analyze two variables: perceived usefulness and ease of use on the influence of attitude towards playing online games. Initially developed by Davis (1989), the technology acceptance model (TAM) has emerged as a robust and parsimonious model [18]. The original TAM emphasizes the importance of perceived ease of use and perceived usefulness as two critical determinants of acceptance [6]. TAM suggests that a player's perception of the degree to which an online game is easy to play affects their perception of usefulness and attitude toward playing the game [17].

According to TAM and drawing from the theory of reasoned action (TRA). Most behaviors of social relevance are under volitional control and are thus predictable from intention. The theory also suggests that many extraneous factors influence the stability of intention, the relationship between intention and behavior depends on two factors: (a) the measure of intention must correspond to the behavioral criterion in action, target, context, and time; and (b) intention does not change before the behavior is observed [5]. The relationships between attitude toward using and behavior intention to use have already been validated by past research on TAM and TRA [19]. Intentions predict behavior, and that the intentions are jointly determined by attitude and subjective norm [20].

As the most crucial determinant in TAM that may influence system use, perceived usefulness is defined as the degree to which a person believes that using a particular system would enhance his or her job performance [4]. Perceived usefulness in-game context was defined loosely as any sense of usefulness in playing games [9]. Perceived usefulness was found to influence the intention of engagement [19] positively. Another factor in the technology acceptance factor is the perceived ease of use. Perceived ease of use is beneficial for initial acceptance of innovation and is essential for adoption and continued use [4]. Perceived ease of use is also an essential factor influencing behavioral intention or attitude [19]. In the context of games, perceived ease of use mainly concerns the effortless in the user interface, such as playing games being easy to learn and sense of control when playing, neither than difficulty level of games.

2.2 Factors in the game

Factors in the game can affect the intention to play online games. Game developers need to analyze game features suitable for experienced gamers and newbie gamers. Social interaction features in the game need to be managed properly so that gamers feel comfortable playing online games [21]. The factors in the game in this study are divided into two variables: game features and trust in the game developer. Game features can be determined from individual game features and cooperate game features [15].

There are several features in online games that make a person attached to playing online games such as multimedia elements (attractive gaming features for attention to gameplay and learning), fun element (playful gaming features for enjoyable gameplay and learning), interactive elements (gaming features for participation and involvement in gameplay and learning), and motivational element (supportive gaming features for meaningful gameplay and learning) [22]. Online game features can be divided into features such as social features, manipulation and control features, narrative and identity features, reward and punishment features, and presentation features [12]. Games that have good quality can be determined from three things such as services (solve gamer problem quickly, know gamers need, give friendly answers to gamers questions), product (game character design, vivid game character, and game story), and gratification (customize character and play various roles in the game) [23]. Features like network convergence and interdependence are positively related to sense of community, and relational switching costs contribute to gamer continuance intention [24].

Trust is a vital element for building a long-term business relationship in online contexts [25]. The form of trust may vary, such as interpersonal trust, organizational trust, and or intra-organizational trust [26]. Trust in technology is determined by human characteristics, environment characteristics, and technology characteristics [27]. Online trust includes satisfaction, attitude, purchase intention, repeat purchase intention, intention to use the website, and loyalty [28]. Trust to game providers or developers can influence the attitude of gamers in playing online games. In determining the trust in a game made consisting of three factors, such as benevolence, competence, and integrity, the overall goal is for the user when making decisions regarding a particular game [29].

In website, online games, players' trust can reduce their uncertainty about the new entertainment environment and make them feel comfortable interacting with the websites, and thus players are more likely to form the intention to play online games [3]. Online game websites should provide security assurance and try to make the gamer experience enjoyable, pleasurable, and entertaining [13].

Trust in online game websites can influence the intention to play games [13]. Several strategies can be applied by game developers such as foster a sense of community within their social network, devise various mechanisms to raise such costs to deter users from switching to other social networks, provide methods to enlarge the social networks of their members, and develop small games within the current game that require collaboration or cooperation to increase interdependence among members [24].

2.3 Intention to Play Online Game

The model posits that actual usage is determined by users' behavioral intention to use, which in turn is influenced by their attitude and the belief of perceived usefulness. The behavioral intention constructs as a proxy to predicting the actual usage is also an essential element in TAM [19]. In games, it is more specifically future intention to play games and continue playing games to continue playing specific [9].

People's intention to regulate mood can be an emotional motivation to play online games [30]. Intention can be a desire to play the game for a long time; this can be influenced by personal factors and external factors of gamers [13]. Three types of gratification affect an individual's continuance intention to use a social network game: hedonic gratification (enjoyment, fantasy, and escapism), utilitarian gratification (achievement), and social gratification (social interaction and social presence) [31]. Intention to play online games can be influenced by perceived ease of use, perceived usefulness, perceived behavior, dan attitude [6]. Intention behavior can be influenced by emotional dimensions and online game user experience [32]. Perceived enjoyment significantly influences the intention to play, which in turn significantly influences the actual behavior. Moreover, the subject norm and perceived critical mass play different roles in determining the intention to play and the actual behavior [33].

Continuance intention to play online games can be influenced by a sense of community and relational switching costs. Playing online games and the costs incurred by gamers if switching can affect the intention to play online games [24]. Continuance intention may have different antecedents in specific online environments. Among them, online games are task environments that are unique in offering users enjoyment, achievements, challenge, and potential frustration [34]. In this study, the intention to play online games can be influenced by the attitude towards the online game and subjective norm. Attitude toward playing online games is determined by technology acceptance factors and factors in the game. Attitude toward playing online games can influence the intention to play online games. Attitude towards using games includes an opinion on whether playing games is a good idea and how much people like playing games; this can affect playing intention [9]. Pleasure and arousal could be two important motives that make people stick with online games playing [30].

The social norm is a popular construct to measure social influence, a key element in theories such as the TRA and the planned behavior theory. In TRA, a person's behavioral intentions are influenced by subjective norms as well as attitude [1]. In social games, users may feel that they need to play social games if they think their friends want them to do. To do this, they can accept feedback from others and avoid being isolated from their friends [33]. The desire to play online games can be influenced by other people's factors or subjective norms. Perceived social pressure from other people on how acceptable the activity (use of games) is [9]. Subjective norm has a significant influence on players' continued intention to play [17]. Social gratification (social interaction and social presence) was found to be important in determining continuance intention. Ample opportunities are available for individual players to share their gaming experience within their existing social network, e.g., with friends or family members connected via social network sites [31]. Players who observe or hear about others around them playing social games also join this activity [33].

From the discussions above, the following hypothesis proposed herein as follows:

H1: Perceived usefulness has significant effect on attitude toward playing online game.
H2: Perceived ease of use has significant effect attitude toward playing online game.
H3: Game features have significant effect attitude toward playing online game.
H4: Trust in game developer has significant effect attitude toward playing online game.
H5: Attitude toward playing online game has significant effect intention to play online game.
H6: Subjective norm has significant effect intention to play online game.

The researcher describes the conceptual framework as follows:

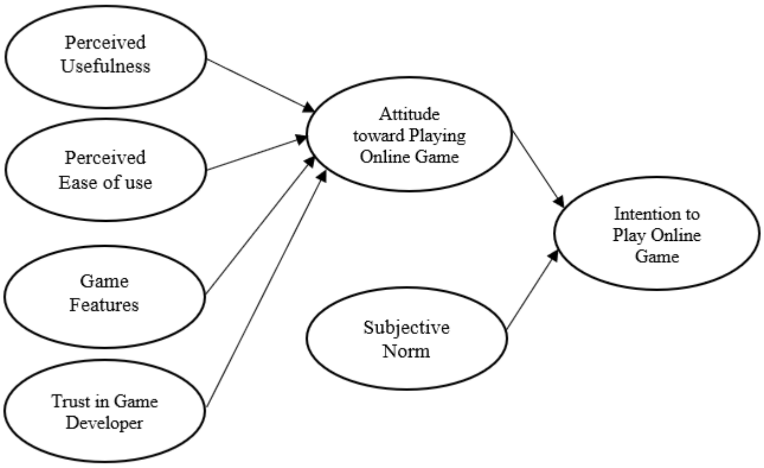

Figure 1. Conceptual Model

3. Research Method

This research used a quantitative approach. A purposive sampling technique was conducted herein and successfully obtained a total of 250 respondents in the survey questionnaire. Researchers chose respondents with criteria: online game players and play online games within a week of the data collected.

To answer the research objectives, we used a questionnaire to measure each variable's effect on the intention to play online games. To ensure the quality of responses, we developed a questionnaire with an acceptable level of reliability and validity, as shown in Tables 1.

From Table 1, there are four questions not meet the validity threshold since their values of r count are less than r table (0.3291). It means these are invalid and need to exclude from the research instrument. Meanwhile, the rest of questions are proven to have good reliability (Cronbach Alpha > 0.60).

Table 1. Instrument Validity

Variable	Validity		Reliability	
	r value	Result	Cronbach's Alpha	Result
Perceived usefulness	-0.380 – 0.905	One question is not valid	0.941	Reliable
Perceived ease of use	0.735 – 0,887	All questions are valid	0.894	Reliable
Game features	0.015 – 0.705	Two questions are not valid	0.844	Reliable
Trust in Game Developer	0.445 – 0.625	All questions are valid	0.697	Reliable
Attitude toward playing online game	0.680 – 0.814	All questions are valid	0.887	Reliable
Subjective norm	0.560 – 0.609	All questions are valid	0.810	Reliable
Intention to play online game	0.208 – 0.669	One question is not valid	0.751	Reliable

4. Results and Discussion

The data that has been collected is then processed using SmartPLS software to analyze the influence between variables. Initially conducted a validation of the built-in research model, measured two main parameters that were built, such as testing the construct validity (convergent and discriminant) and testing internal consistency (reliability). The construct validity test can be measured with the loading score parameters, AVE, communality, R2, and redundancy. AVE score must be> 0.5, communality> 0.5, and redundancy is close to 1. The reliability test can be seen from Cronbach's alpha and composite reliability values. Cronbach's alpha value must be > 0.6 and the composite reliability value must be > 0.7.

4.1 Outer Model Test

A convergent validity test is used to describe the correlation between constructs and indicators. The greater the correlation values, the better the relationship between constructs and indicators. Correlation is declared valid with a loading factor of ≥0.5. After eliminating invalid indicators, the following results are obtained.

Table 2 shows that that all loading scores are above 0.5, so there are no indicators to be eliminated from the research model, so the next step is to conduct a discriminant validation test. Discriminant validity can be evaluated by looking at AVE scores; AVE score must be above 0.5. Table 3 shows that all AVE scores have acceptable values. It can be said that discriminant validity is good.

Table 2 Contruct Validity and Reliability

Constructs	Item	Loading factor	Cronbach Alpha	CR	AVE
Perceived usefulness	PU_02	0.976	0.950	0.976	0.952
	PU_03	0.975			
Perceived ease of use	PEU_01	0.909	0.907	0.940	0.840
	PEU_02	0.946			
	PEU_03	0.894			
Game features	GF_01	0.684	0.772	0.847	0.528
	GF_02	0.774			
	GF_03	0.777			
	GF_04	0.598			
	GF_05	0.781			
Trust in Game Developer	TR_01	0.742	0.706	0.835	0.629
	TR_02	0.845			
	TR_03	0.789			
Attitude toward playing online game	ATT_01	0.830	0.881	0.927	0.809
	ATT_02	0.934			
	ATT_03	0.930			
Subjective norm	SN_01	0.883	0.815	0.873	0.635
	SN_02	0.655			
	SN_03	0.783			
	SN_04	0.848			
Intention to play online game	INT_02	0.833	0.850	0.898	0.687
	INT_03	0.834			
	INT_04	0.787			
	INT_05	0.861			

4.2 Inner Model (Structural Model)

Testing of the structural model includes all statements that have passed the validity and reliability tests. The structural model test shows the relationship between latent variables with other latent variables. The following are the results of the influence between variables based on the proposed hypothesis.

Table 3. Direct and Indirect Effects

Variable	Path Coefficient	Mean	Std. Deviation	P Value
PU -> ATT	0.240	0.249	0.095	0.012
PEU -> ATT	0.009	0.014	0.077	0.904
GF -> ATT	0.499	0.489	0.117	0.000
TR -> ATT	0.352	0.355	0.097	0.000
ATT -> INT	0.481	0.464	0.108	0.000
SN -> INT	0.472	0.500	0.103	0.000

Note: Significant at 0.05 level; PU = Perceived usefulness; PEU = Perceived Ease of use; GF = Game features; TR = Trust in game developer; ATT = Attitude toward playing online game; SN = Subjective norm; INT = Intention to play online game

4.3 Hypothesis testing

Based on the results of hypothesis testing shows that perceived usefulness has a significant effect on attitude toward playing online games with a significance level of 0.012 and a path coefficient of 0.240. The second hypothesis shows that perceived ease of use does not have a significant effect on attitude toward playing online games with a significance level above 0.05 (0.904). The third hypothesis shows that game features have a significant effect on attitude toward playing online games with a significance level of 0,000 and a path coefficient of 0.352. The fourth hypothesis shows that trust in game developers has a significant influence on attitude toward playing online games with a significance level of 0,000 and a path coefficient of 0.481. The fifth hypothesis shows that attitude toward playing online games has a significant effect on the intention to play online games with a significance level of 0,000 and a path coefficient of 0.481. Then, the sixth hypothesis shows that subjective norm has a significant effect on the intention to play online games with a significance level of 0,000 and a path coefficient of 0.472. Therefore, only hypothesis 2 is rejected. The results can be seen in the conceptual model, which is presented in Figure 2.

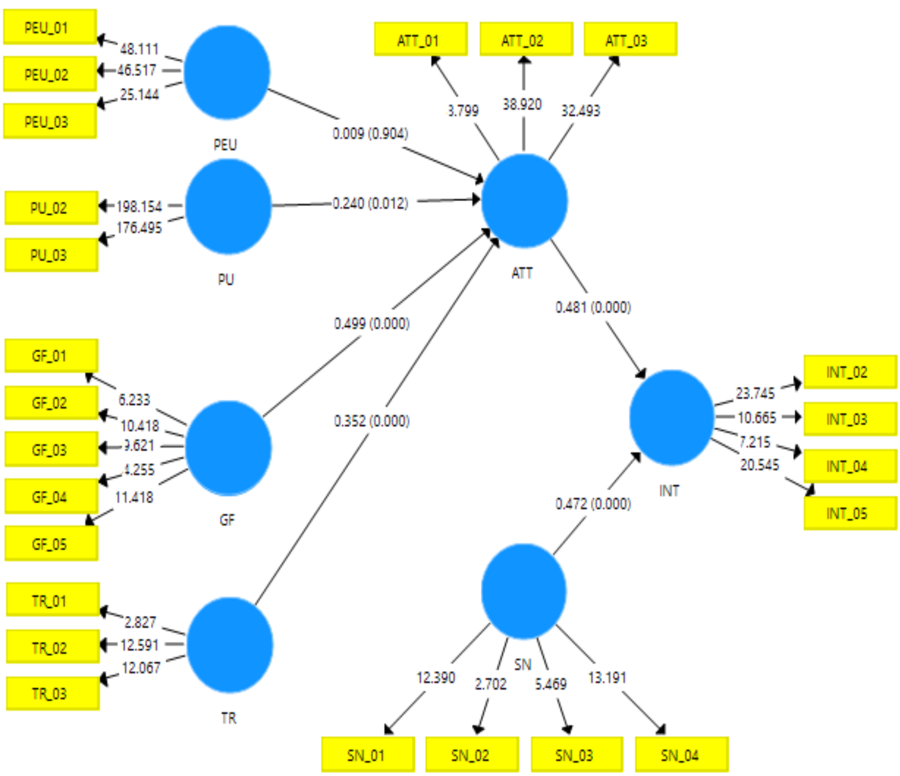

Figure 2. Model Results

5. Discussion

Based on the results of the study showed that perceived usefulness significantly affected the attitude toward playing online games. The better-perceived usefulness will increase attitude towards playing online games. Gamers gain perceived usefulness in playing games such as the usefulness in playing games, the benefits gained, and the happy feelings obtained in playing games.

Prior studies have shown an influence between perceived usefulness on attitude [35]; [20]; [36]. TAM postulates that perceived usefulness and ease of use are two cognitive belief dimensions that shape the (potential) users' attitude, which determines the intention to use and actual use [36]. In this TAM model, the attitude towards using, which is influenced by perceived usefulness and perceived ease of use, is the major determinant for a user to accept or reject a certain system [2]. When using a technology is fun and pleasurable, users will be intrinsically motivated to adopt it [17]. A person's feelings in playing games include feeling happy, excited, excited, curious, challenged, and various feelings that can be useful in playing games. As a game developer, you need to pay attention to this factor in increasing your intention to play online games.

The second hypothesis testing results show that perceived ease of use does not significantly influence online games' attitude. Perceived ease of use does not make a high contribution in increasing attitude towards playing online games. Perceived ease of use in this study is seen from the ease of being skilled in playing games and the ease of playing online games. For some gamers, the difficulty level in playing a game becomes a challenge that must be resolved and skill in playing the game can be obtained by getting used to playing the game.

Previous research shows that perceived ease of use has no direct effect on attitude [36]. However, attitude in playing games can be influenced by enjoyment. Enjoyment is obtained if several factors in the game that are played meet the expectations of gamers. Perceived enjoyment and perceived ease of use are the chief determinants of user attitudes to play mobile social games [2]. Ease-of-use and enjoyment are interrelated, and both have influence in intention to use [37]. Every game genre has different game characteristics, different difficulty levels, and different in-game features adapted to type gamers. Perceive ease of use in online games also needs to analyse the type of gamer so that there is a match between the game and the user.

Game features significantly influence attitude toward playing online games. The better game features will increase the attitude towards playing online games. Game features in this study were analysed from several features contained in the game. First, social features are social interaction features that support communication and interaction in the game. Second, Manipulation and control features consist of user input features, save features, player management features, and non-controllable features. Third, Narrative and identity features such as game avatar features, storytelling in the game, theme and type of game. Fourth, reward and punishment features such as the benefits gained in the game (points, bonus, character experience, and level). The fifth, presentation features such as graphics and sound features, explicit content features, and in-game advertising features. A variety of features in this game contribute to the attitude of playing online games.

There are relationship between cooperative game features and intention is fully mediated by group norms, social identity, joint commitment, attitudes toward cooperation, and anticipated positive emotions [15]. Cooperative game features can affect intention, but individualistic game features do not directly affect intention [15]. Most popular online video games focus on competition wherein individual gamers face opposing players, collaboration wherein multiple players face a familiar opponent or a combination of the two in which teams of players compete against each other to achieve a goal [21].

The fourth hypothesis testing shows that trust in game developer has a significant effect on attitude toward playing online game. The higher trust in the game developer, the more attitude towards playing online games will increase. Trust in game developers can be determined from game developers who can be trusted about information, conditions, features, and services promised

Several previous studies have shown the influence of trust on attitude directly [18]; [2] and indirectly [3]. The findings relating to trust reinforced the interpretation that trust, in the context of Internet-related behaviours, is a multidimensional construct [18]. Trust in game developers can be created from these well-known game developer brands. Game developers who have a lot of experience by making various types of game genres become the attention of gamers to play the game.

The fifth hypothesis results indicate that attitude toward playing online games has a significant effect on the intention to play online games. The higher attitude toward playing online games, the higher intention to play online games. A positive attitude will assume that online games as one of the activities that provide benefits in their lives, so a positive attitude will increase the intention to play online games.

Previous studies have shown the effect of attitude on intention [17]; [18]; [20]; [35]. Attitude of virtual goods in the game can affect the intention to play and buy virtual products in the game [16]. Attitudes and intentions towards playing mobile social games and helped to reveal implications for the successful games [2]. Attitude toward playing online games is a concern of game developers because every gamer has a different attitude to each different game. Many factors can influence it depending on the background of the gamer, the type of game played, the game console that is of interest, experience in playing games, and other factors.

The sixth hypothesis testing results show that subjective norms have a significant effect on intention to play online games. The higher the subjective norm, the higher the intention to play online games. Support from social factors both inside and outside the game can determine the intention to play online games. Support from friends, co-workers, or family who do not forbid playing online games can increase intention to play online games.

Previous research shows that there is a subjective norm on intention [35]; [38]; [20]. The subjective norm affects attitude directly as well as behavioural intentions mediated by attitude [39]. Successful mobile social games should exert significant efforts to deliver enjoyable games easily and provide excellent social interaction experience to encourage users to share their fun [2]. Social support factors encourage someone to play the game. The subjective norm in this research is not only to support social interactions in online games but also from friends and family who do not prohibit playing online games.

6. Conclusion

Based on the results of data analysis and discussion, conclusions can be determined from these results. Attitude toward playing online games and subjective norms affect intention to play online games. The higher the attitude toward playing online games and the higher the subjective norm, the higher the intention to play online games. The analysis also shows several variables that affect attitude towards playing online games: perceived usefulness, game features, and trust in game developers. But Perceived Ease of use does not affect attitude toward playing online games. this is because attitude is not formed from ease of use in online games. Although the game has a high level of difficulty and requires high effort to become expert, gamers have an attitude towards playing online games more affected by game features. The better game features will contribute significantly to attitude toward online gameplay.

Based on the study results and the conclusions in this study, the suggestions in this study are to increase the intention to play online games so the need for a positive attitude in playing online games and the need for social support in playing. The attitude in playing online games is more influenced by game features and trust in game developers. Game developers, game designers, and game companies need to make games that fit their target market by taking into several features such as social features, Manipulation and control features, narrative and identity features, reward and punishment features, and presentation features. Trust in game developers also have a big influence on attitude in playing online games, so game developer needs to increase the trust of gamers such as through effective branding. Game developers who have much experience with making various types of game genres can also affect the trust of gamers to play the game.

7. Limitations and Future Research

This research is not without limitations. First, this research is only limited to a few factors that influence intention to play online games. Future research is expected to add other relevant variables in increasing intention to play online games. Second, this research is still limited to a limited area and only limited to gamers in Indonesia. So, the findings cannot be generalized in all countries, because each country has different characteristics. Future research is expected to expand research with respondents from various countries. Third, we must emphasize that our research is a picture of time. The gaming market is changing rapidly, and the demands and expectations of gamers can change quickly. Future research is expected to adjust to the situation at that time. Fourth, the current number of respondents is still limited regarding the available resources in data collection. Future research is expected to increase the number of respondents with different backgrounds. Fifth, the many types and number of games on the market allows people to find the most desirable games, maybe the game can be a leisure for gamers and reduce the interest to visit tourist attractions. In the future, it is hoped that there will be research that analyses the effect of games, leisure, and the desire to visit tourist attractions.

References

[1] C. Hsu and H. Lu, "Why do people play on-line games? An extended TAM with social influences and flow experience," *Inf. Manag.*, vol. 41, pp. 853–868, 2004.

[2] H. Chen, W. Rong, X. Ma, Y. Qu, and Z. Xiong, "An Extended Technology Acceptance Model for Mobile Social Gaming Service Popularity Analysis," *Mob. Inf. Syst.*, vol. 2017, pp. 1–12, 2017.

[3] J. Wu and D. Liu, "The effects of trust and enjoyment on intention to play online games," *J. Electron. Commer. Res.*, vol. 8, no. 2, pp. 128–140, 2007.

[4] F. D. Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Q.*, vol. 13, no. 3, pp. 319–340, 1989.

[5] Ajzen and M. Fishbein, "Prediction of GoalDirected Behavior: Attitudes, Intentions, and Perceived Behavioral Control," *J. Exp. Soc. Psychol.*, no. 22, pp. 453–474, 1980.

[6] X. Wang and D. H. L. Goh, "Video Game Acceptance: A Meta-Analysis of the Extended Technology Acceptance Model," *Cyberpsychology, Behav. Soc. Netw.*, vol. 20, no. 11, pp. 662–671, 2017.

[7] J. Wang, L. A. Jackson, H. Wang, and J. Gaskin, "Predicting Social Networking Site (SNS) use : Personality, attitudes, motivation and Internet self-efficacy," *Pers. Individ. Dif.*, vol. 80, pp. 119–124, 2015.

[8] M. Lee and M. Lee, "Understanding the behavioural intention to play online games An extension of the theory of planned," *Online Inf. Rev.*, vol. 33, no. 5, pp. 849–872, 2011.

[9] J. Hamari and L. Keronen, "Why do people play games? A meta-analysis," *Int. J. Inf. Manage.*, vol. 37, pp. 125–141, 2017.

[10] M. I. Merhi, "Towards a framework for online game adoption," *Comput. Human Behav.*, vol. 60, pp. 253–263, 2016.

[11] C. Y. Lu, W. J. Yeh, and B. T. Chen, "The Study of International Students' Behavior Intention for Leisure Participation: Using Perceived Risk as a Moderator," *J. Qual. Assur. Hosp. Tour.*, vol. 17, no. 2, pp. 224–236, 2016.

[12] D. King, P. Delfabbro, and M. Griffiths, "Video game structural characteristics: A new psychological taxonomy," *Int. J. Ment. Health Addict.*, vol. 8, pp. 90–106, 2010.

[13] C. C. Liu, "Understanding player behavior in online games: The role of gender," *Technol. Forecast. Soc. Change*, vol. 111, pp. 265–274, 2016.

[14] N. Yee, "Motivations for Play in Online Games," *Cyberpsychology Behav.*, vol. 9, no. 6, pp. 772–775, 2006.

[15] B. Morschheuser, M. Riar, J. Hamari, and A. Maedche, "How games induce cooperation? A study on the relationship between game features and we-intentions in an augmented reality game," *Comput. Human Behav.*, vol. 77, pp. 169–183, 2017.

[16] J. Hamari, "Why do people buy virtual goods? Attitude toward virtual good purchases versus game enjoyment," *Int. J. Inf. Manage.*, vol. 35, no. 3, pp. 299–308, 2015.
[17] M. Lee, T. Tsai, M. Lee, and T. Tsai, "What Drives People to Continue to Play Online Games? An Extension of Technology Model and Theory of Planned Behavior," *Int. J. Hum. Comput. Interact.*, vol. 26, no. 6, pp. 601–620, 2010.
[18] S. Y. Yousafzai, G. R. Foxall, and J. G. Pallister, "Explaining Internet Banking Behavior: Theory of Reasoned Action, Theory of Planned Behavior, or Technology Acceptance Model," *J. Appl. Soc. Psychol.*, vol. 40, no. 5, pp. 1172–1202, 2010.
[19] Y. Yang, Y. Asaad, and Y. Dwivedi, "Examining the impact of gamification on intention of engagement and brand attitude in the marketing context," *Comput. Human Behav.*, vol. 73, pp. 459–469, 2017.
[20] C. Hsu and J. C. Lin, "Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation," *Inf. Manag.*, vol. 45, pp. 65–74, 2008.
[21] J. Fox, M. Gilbert, and W. Y. Tang, "Player experiences in a massively multiplayer online game: A diary study of performance, motivation, and social interaction," *New Media Soc.*, no. 2018, pp. 1–18, 2018.
[22] A. I. Abdul Jabbar and P. Felicia, "Gameplay Engagement and Learning in Game-Based Learning: A Systematic Review," *Rev. Educ. Res.*, vol. 85, no. 4, pp. 740–779, 2015.
[23] S. J. Kim, Y. K. Choi, K. H. Kim, and H. Liu, "Country of origin and brand image influences on perceptions of online game quality," *J. Consum. Behav.*, vol. 14, pp. 389–398, 2015.
[24] F. C. Tseng, H. C. Huang, and C. I. Teng, "How Do Online Game Communities Retain Gamers? Social Presence and Social Capital Perspectives," *J. Comput. Commun.*, vol. 20, pp. 601–614, 2015.
[25] A. Bilgihan, "Gen y customer loyalty in online shopping: An integrated model of trust, user experience and branding," *Comput. Human Behav.*, vol. 61, pp. 103–113, 2016.
[26] C. Hui and Y. Cao, "Examining WeChat users' motivations, trust, attitudes, and positive word-of-mouth:Evidence from China," *Comput. Human Behav.*, vol. 41, pp. 104–111, 2014.
[27] K. Siau and W. Wang, "Building Trust in Artificial Intelligence , Machine Learning , and Robotics," *Cut. Bus. Technol. J.*, vol. 31, no. 2, pp. 47–53, 2018.
[28] Y. Kim and R. A. Peterson, "A Meta-analysis of Online Trust Relationships in E-commerce," *J. Interact. Mark.*, vol. 38, pp. 44–54, 2017.
[29] D. S. B. Diego, M. Niemann, and B. Hellingrath, "The Game of Trust : Using Behavioral Experiment as a Tool to Assess and Collect Trust-Related Data," in *IFIP International Conference on Trust Management (TM)*, 2017, vol. 1, pp. 41–48.
[30] J. Bae, D.-M. Koo, and P. Mattila, "Affective motives to play online games," *J. Glob. Sch. Mark. Sci.*, vol. 26, no. 2, pp. 174–184, 2016.
[31] H. Li, Y. Liu, X. Xu, J. Heikkilä, and H. Van Der Heijden, "Modeling hedonic is continuance through the uses and gratifications theory: An empirical study in online games," *Comput. Human Behav.*, vol. 48, pp. 261–272, 2015.
[32] M. Huang, R. Ali, and J. Liao, "The effect of user experience in online games on word of mouth: A pleasure-arousal-dominance (PAD) model perspective," *Comput. Human Behav.*, vol. 75, pp. 329–338, 2017.
[33] A. Chen, Y. Lu, and B. Wang, "Enhancing perceived enjoyment in social games through social and gaming factors," *Inf. Technol. Int. Dev.*, vol. 29, no. 1, pp. 99–119, 2016.
[34] G. Y. Liao, H. C. Huang, and C. I. Teng, "When does frustration not reduce continuance intention of online gamers? The expectancy disconfirmation perspective," *J. Electron. Commer. Res.*, vol. 17, no. 1, pp. 65–79, 2016.

[35] F. Liébana-cabanillas, I. R. De Luna, and F. Montoro-, "Intention to use new mobile payment systems : a comparative analysis of SMS and NFC payments," *Econ. Res. Istraživanja*, vol. 30, no. 1, pp. 724–742, 2017.
[36] S. H. Chuah, P. A. Rauschnabel, N. Krey, and B. Nguyen, "Wearable technologies The role of usefulness and visibility in smartwatch adoption," *Comput. Human Behav.*, vol. 65, pp. 276–284, 2016.
[37] L. F. Rodrigues, A. Oliveira, and C. J. Costa, "Computers in Human Behavior Does ease-of-use contributes to the perception of enjoyment ? A case of gami fi cation in e-banking," *Comput. Human Behav.*, vol. 61, pp. 114–126, 2016.
[38] A. Bhattacherjee and C. Lin, "A unified model of IT continuance : three complementary perspectives and crossover effects," *Eur. J. Inf. Syst.*, no. 2014, pp. 1–10, 2014.
[39] J. Hamari and J. Koivisto, "Working out for likes: An empirical study on social influence in exercise gamification," *Comput. Human Behav.*, vol. 50, pp. 333–347, 2015.

4

Examining Push-Pull Motivation and Travel Intention for Potential Travelers in Indonesia Using Theory of Planned Behaviour

Najla Salsabila[1], Yeshika Alversia[2a]

[1,2]Faculty of Economics and Business, Universitas Indonesia, Jakarta, Indonesia

[a)] Corresponding author: yeshika@ui.ac.id

Abstract

This study aims to explain the relationship between travel motivations and travel intentions for the potential tourist market from Indonesia, using push-pull motivation theory and theory of planned behavior as the conceptual framework. Self-administrated questionnaires were utilized to gather data from 853 participants. To examine the proposed model, SEM (Structural Equation Modeling) was applied to see how to push motivation, pull motivation, attitude, subjective norm, and perceived behavioral control, affect travel intention. The results revealed that push motivation could influence potential tourists to have a travel intention. The relationship can be found either directly or through attitude, which can later influence travel intention. In addition, perceived behavioral control was also found to influence travel intention. On the contrary, the subjective norm was not found to influence travel intention in this case. The relationship between pull motivation and travel intention was not found in this study.

Keywords: Push Motivation, Pull Motivation, Theory of Planned Behavior, Attitude, Subjective Norm, Perceived Behavioral Control, Travel Intention

1. Introduction

Over the last decade, the global tourism market has continued to grow, making it one of the fastest-growing economies in the world. Globally, International tourist arrivals have demonstrated promising growth, from 25 million in 1950 to 1.186 billion in total global arrival in 2015. Despite the global economic crisis of 2009, the tourism sector continues to grow, where the year 2015 marks the sixth year in a row from the growth of the global tourism sector. The number of international tourist arrivals (overnight visitors) globally in 2015 was increased by 4.6% (an additional 52 million international travelers) from the previous year, reaching a total of 1.186 billion globally. This growth is projected to continue. According to the estimates of the World Tourism Organization, international tourist arrivals will increase to 1.8 billion in 2030. Seeing the potential of the tourism sector, it is not surprising that many countries have prioritized development for this sector.

In Indonesia, for example, changes in consumption patterns, have become one of the reasons for the growth and popularity of tourism lately. Based on data from the Badan Pusat Statistik (BPS) in 2017, consumption related to recreation and culture jumped to 6.5%. Much faster than the growth of other public consumption in the Gross Domestic Product (GDP) component which was only 4.95% in the same period. This shows that there is a shift from consumption of goods into a need to spend on leisure activity.

Study of travel motivation has been used to help scholars and travel industry players understand the needs and the behaviors of tourists. This is important because it reflects what makes people want to travel and how those motivations can lead to an intention to travel. Travel motivation is often measured using the push-pull theory. Push-Pull theory in the context of tourism was first introduced in 1977 [1] to test the various motivations of tourists, where it identifies "Anomie" and "ego enhancement" as two main motives. It was stressed that the "driving factors" are the internal desire of tourists to escape from stress, or to change the daily routine and environment, the forces that generate interest in tourists for a vacation, this driving factor called push motivation [1]. There are also, the "traction factors", factors that can realize the external desires of tourists or attractions in tourist destinations that can generate interest for tourists to travel, which is called pull motivation. In short, people choose to travel because they are being pushed and pulled by these two different powers. In this study, push-pull factors are used to explain the motivation to travel for potential tourist market in Indonesia.

Then to explain how the motivation for travel can lead to travel intentions, this research combines the theory of planned behavior (TPB) in the research model. TPB has been widely used to predict behavioral intention, especially on topics related to consumer behavior. In tourism, the TPB model has been used to assist researchers in measuring traveler's intentions. TPB and the theory of reasoned action (TRA) were both used and compared to investigate which theory better predicts travel abroad behavior, and later, it found that the theory of planned behavior better predicts travel abroad behavior [2]. This application of the theory of planned behavior provides a means to better understand why some people travel abroad and others do not. To enrich previous research [3] the results of this study can provide travel planners and managers with more accurate information concerning the motivation of potential tourists and help to understand their traveling behavior which can later be used to develop a marketing strategy for the tourism market. The relationship between push-pull motivation and behavioral intention has also been found in several previous studies [4] [5].

2. Literature Review

2.1 Push Pull Factors Theory

Motivation is one of the driving forces of behavior. Motivation is one of the most critical factors for determining tourist behavior [6]. Having a strong understanding of what motivates tourists will enable researchers and marketers to predict tourist behavior. This study uses the push-pull factors theory to get a better understanding of what motivates tourists to travel.

Push-pull factors were first introduced in 1977 to test various tourist motivations [7]. The driving factor is the factor that generates tourists' interest for a vacation [7]. On the other hand, the pull factor embodies the external desires of tourists or destination attractions that can trigger tourists' interest to travel. In short, people travel because they are being pushed and pulled by these two different forces. The push factor is considered important in starting the desire to travel, while the pull factor is considered more relevant in explaining destination choice [18]. Several tourism studies have tried to redefine what indicators should be included as push factors and pull factors [7]. Most of the push factors is something that comes internally, such as the desire to escape, rest, pride; adventure; and social interaction [8]. At the same time, the pull factors emerge because of the destination's attractiveness, such as natural scenery, recreational facilities, and cultural attractions. There are some similarities related to the indicators used. Escaping; knowledge; novelty; relaxation; ego enhancement, are often included as push motivations in a couple of previous studies. While safety, culture; history; and cleanliness are often seen as pull motivation [19] [20] [21] [9]. By considering previous studies that used push-pull factors, mainly because of the familiarity of the indicators and the latest relevance, this study will adopt the push-pull measurement created by Yousefi and Marzuki [9] measure tourist motivation.

2.2 Theory of Planned Behaviour

The Theory of Planned Behavior (TPB) is an extension of the Theory of Reasoned Action (TRA). Both are often used in consumer behavior research, which includes explaining the antecedents that can affect the intentions to act on certain behavior. Behavioral intention is defined as the probability for someone to act on certain behavior, the extent to which a person has formulated a conscious plan to do or not do a future behavior [10]. In this study, behavioral intention is the intention to travel. The main difference between TRA and TPB lay on one additional determinant factor of intention.

The TPB postulates three conceptually independent determinants of intentions. The first is the attitude toward the behavior and refers to the degree to which the person has a favorable or unfavorable evaluation of the behavior in question. The second is the subjective norm, which refers to the social pressure to do or not do certain behaviors. The third and the new antecedent of intention, which was not part of the TRA, is the degree of perceived behavioral control (PBC). This third factor refers to the perceived ease or difficulty of performing the behavior, and it is assumed to reflect experience, as well as anticipated impediments and obstacles.

The more people can control a specific behavior, the better the TPB predicts the behavior [11]. In the context of traveling, people might not be able to travel abroad if they do not have sufficient resources such as time or financial support, even though they have strong intentions to travel abroad. They are indicating that traveling could be highly influenced by perceived behavioral control. This application of the theory of planned behavior provides a means for a better understanding of why some people travel abroad and others do not. This study's results can provide travel planners and managers with more accurate information concerning the motivation of overseas tourists and help to understand their traveling abroad behavior. It can be used to develop a marketing strategy for the tourism market.

2.3 Travel Motivation and Travel Intention

Although the motivation explained by push-pull factors was found to influence travel intention, the strength of the relationship between the two is still relatively weak [12]. This is evidenced by the R2 value, which is quite low, making mediation between the two possible. Combining push-pull factors theory with TPB is expected to fill the existing research gap. Where TPB can help explain the antecedents of behavioral intention, namely attitude, subjective norm and perceived behavioral control. The influence of motivation on attitude was found to be significant [13], which used the following four factors: knowledge, relaxation; novelty; shopping, as a motivational factor for traveling. Based on previous statements, hypotheses that can be developed are as follows:

H1: Push Motivation positively influences Attitude towards Traveling
H2: Pull Motivation positively influences Attitude towards Traveling
H3: Attitude towards Traveling positively influences Behavioral Intention
H4: Subjective Norm positively influences Behavioral Intention
H5: Perceived Behavioral Control positively influences Behavioral Intention
H6: Push Motivation positively influences Behavioral Intention
H7: Pull Motivation positively influences Behavioral Intention

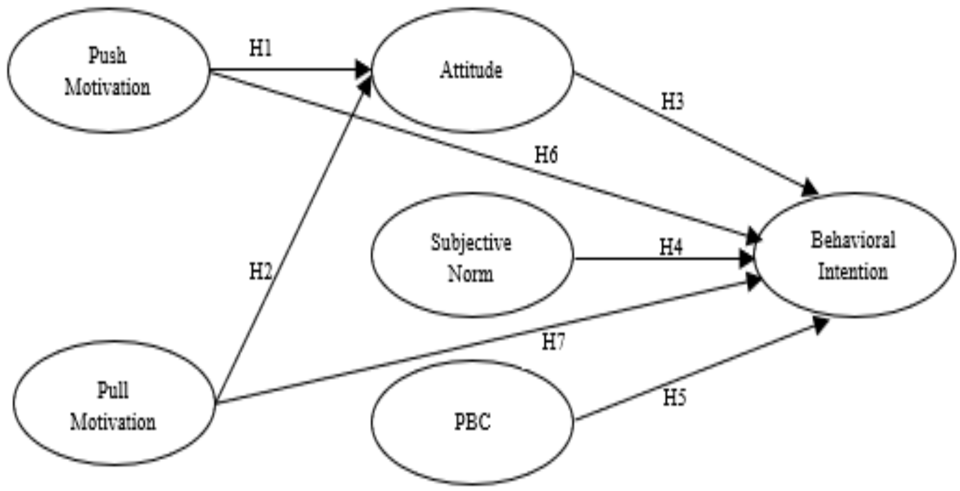

Figure 1. Proposed Research Model

3. Research Method

After conducting a literature review and forming a research model, the next step was data collection. This study used primary data obtained through online surveys, which was conducted in Indonesia. Before the questionnaire was widely distributed, researchers conducted a pre-test to ensure the validity and reliability of the instruments used. In total, there are 51 questions to test the research hypothesis. Where 18 questions aimed at measuring push motivation (sub-constructs: 8 items for knowledge and novelty, 6 items for ego enhancement, and 4 items for rest and relaxation). 18 Questions to measure pull motivation (sub-constructs: 8 items for environment and safety, 5 items for cultural and historical attractions, and 5 items for tourist facilities). 4 questions for attitudes, 3 questions for subjective norm, 4 questions for perceived behavioral control, and 4 questions for behavioral intention.

Then, to examine the proposed model, SEM (Structural Equation Modeling) was applied using AMOS. There were two main steps taken in SEM analysis. The first step was to examine and validate the measurement model, or commonly known as confirmatory factor analysis (CFA). The second step was to test the structural model and test the hypothesis, commonly known as the structural model. At the CFA stage, unidimensionality must be achieved, meaning that the loading factor for each item is not less than 0.5. Items whose factor loading less than 0.5 need to be removed from the measurement model to achieve the validity, reliability, and suitability of the measurement model [14]. Composite reliability (CR) and average variance extracted (AVE) also need to be ensured in this stage. Because the hypothesis model contains 47 indicators that reflect five latent variables and five latent variables, two of them: push motivation and pull motivation have three sub-constructs, so the Second-Order Confirmatory Analysis was used.

At the structural model stage, the nature of the relationship between each construct can be known. In analyzing structural models, two tests need to be done, first is the Goodness of Fit test, to make sure compatibility between the data obtained and the proposed research model [15]. There are three (3) subgroups of Goodness of Fit measures, namely: Absolute fit measure, Incremental fit, and Parsimonious fit. According to Hair (2010), to do an analysis, researchers don't have to use the entire index but only use 3 to 4 indexes to provide evidence of the goodness of fit. The second test is conducted to analyze the relationship and hypothesis, in the hypothesis test, the relationship between variables is said to be significant when the t-values of the path produced are at least 1.64 (for one-tailed test).

4. Research Findings

4.1 Demographic Characteristics

A total of 853 respondents were obtained in this study. From the questionnaire filled out by each respondent, the researcher managed to gather some demographic information. The results showed that majority of respondents were female (92.8%), 18 to 24 years old (53.9%). Mostly from Java island (77%). Had an education level of diploma/bachelor's degree (64.9%), working as a private employee (26.6%) and university student (32.8%), had monthly expenditure ranging from Rp1,500,000 to Rp3,000,000.

4.2 Measurement Model

It can be said that each latent variable used in this study doesn't have a convergent validity problem, proven by AVE> 0.5 for every latent variable, which means each latent variable is well explained by its observed variables. Then, the reliability of the latent variables was successfully fulfilled, evidenced by the value of CR> 0.7 for all variables. The measurement model result suggest that it was suitable to proceed with the evaluation of the structural model

Table 1. Pull Motivation

Pull Motivation Items	**SLF**	**CR**	**AVE**
Factor 1: Environment and Safety			
I travelled because of the safety and security	0.729		
I travelled because of hygiene and cleanliness	0.679		
I travelled because of the nice weather	0.564	0.933	0.822
I travelled for friendliness of the local people	0.686		
I travelled because of the availability of travel-related information	0.798		
Factor 2: Cultural and Historical Attraction			
I travelled to see the variety of local culture	0.677		
I travelled to see cultural and historical places/sites	0.576		
I travelled because of the culinary tourism	0.592		
I travelled to see natural scenery and landscape	0.709		
Factor 3: Tourist Facilities			

I travelled because of travel distance	0.615		
I travelled because of the convenience of traveling and ease of tour arrangement	0.531		
I travelled because of the quality of tourist places	0.796		
I travelled because of the reasonable price	0.647		

Table 2. Push Motivation

Push Motivation Items	SLF	CR	AVE
Factor 1: Knowledge and Novelty		0.831	0.621
I want to experience cultures that are different from mine	0.607		
I want to see how other people live and their way of life	0.651		
I want to see something new and exciting	0.735		
I want to see something different that I don't normally see	0.762		
I want to travel and go somewhere with a different Environment	0.783		
I can fulfil my dream and self-curiosity about the country I want to visit	0.770		
Factor 2: Ego Enhancement			
I want to travel to a country that I always wanted to go to	0.830		
I want to go to places that I have always wanted to visit	0.836		
I can talk about my experience with other people when I return home	0.454		
Factor 3: Rest and Relaxation			
This is the time I can escape from stress in my daily life	0.848		
This is the time I can be away from the routine life	0.656		
This is the time I can be away from the routine life	0.651		
I want to enjoy and make myself happy while traveling	0.796		

Table 3. Attitude, SN and PBC

Items	SLF	CR	AVE
Attitude			
I really like traveling	0.818	0.931	0.77
I think traveling is a fun activity	0.900		
I think traveling is a positive thing	0.884		
Traveling makes me excited	0.906		
Subjective Norm			
My family allows me to travel	0.699	0.734	0.480
Most of my friends like to travel	0.629		
Important people in my life encourage me to travel	0.745		
Perceived Behavioural Control			
I am fully in control of my decision to travel	0.696	0.771	0.459
If I want, I can easily travel abroad	0.758		
There are many supporting facilities available to help improve my travel experience	0.672		
There are interesting tourist sites within near distance from where I live	0.570		

Items	**SLF**	**CR**	**AVE**
Behavioural Intention			
I will be traveling in the next 12 months	0.657	0.809	0.517
I want to travel within the next 12 months	0.746		
I will do more travel in the future	0.818		
I will recommend travel activities to others	0.641		

Table 4. Goodness of Fit

	Index	Result	*Cut Off Value*
Absolut Fit	RMSEA	0.052	≤ 0.08
	SRMR	0.059	< 0.09
Incremental Fit	CFI	0.904	≥ 0.90
Parsimonious Fit	Chisq/df	3.304	≤ 5.0

4.3 Structural Model

In the structural model analysis, the causal relationship between variables can be found to be statistically significant. For this reason, the t-values in each path between variables need to be observed. Because this study is one-tailed, the relationship of the latent variable path is said to be significant if t-values > 1.64. Seen in table V, of the seven paths, four paths have a significant relationship, namely the relationship between push motivation to attitude, attitude to behavioral intention, perceived behavioral control to behavioral intention, and push motivation to behavioral intention, this is evident from the t-values greater than 1.64. Whereas the other three paths, subjective norm to behavioral intention, pull motivation to attitude, and pull motivation to behavioral intention, do not have a statistically significant relationship.

Table 5. Result of The Hypothesis Testing

Paths	***t-values***	**Coefficient**	**Hypothesis**
Push Motivation → Attitude	4.605	0.905	H1 supported
Pull Motivation → Attitude	-0.352	-0.058	H2 not supported
Attitude → Behavioral Intention	1.782	0.227	H3 supported
Subjective Norm → Behavioral Intention	0.408	0.040	H4 not supported
PBC → Behavioral Intention	1.954	0.239	H5 supported
Push Motivation → Behavioral Intention	1.727	0.529	H6 supported
Push Motivation → Behavioral Intention	-1.423	-0.278	H7 not supported

5. Conclusion and Implication

Results from this study show that push motivation has a positive and significant influence on travel attitude. So, the more push motivation possessed by someone, the more positive their perception of traveling will be. This relationship is in line with the findings of several previous tourism studies [13]. With such motivation in the respondent, it is not surprising when the results of this research test found that the respondent had a positive perception of tour activities.

Attitude has a positive and significant influence on behavioral intention. So, it can be said that the better their perception of travel activities, the stronger their intention to travel. The influence of attitude on behavioral intention has indeed been proven in several previous tourism-related studies, such as the motivation and intentions of tourists in visiting dark tourism [16].

Subjective norm does not significantly influence travel intention for the potential tourist market in Indonesia. The social pressure to carry out travel activities is not significant in influencing respondents into travel. So, it can be said that Indonesia's potential tourist market is not affected by family, friends, and other important referents in deciding whether or not to travel

Push motivation also has a direct influence on behavioral intention. So, it can be said that the higher the push motivation a person has, the stronger one's intention to travel. This relationship is in line with findings from previous tourism research. It was found that push motivation, especially knowledge and novelty seeking, were the main drivers in encouraging international tourists to travel to Penang [9]. A particular reason for traveling abroad was to look for experiences or lifestyles different from their usual environment, which can be seen as push motivation [17].

Pull motivation does not have a positive and significant influence on traveling attitude and behavioral intention. Bearing in mind that this research's context is 'what makes a person want to travel' without providing a tourist destination specification. Pull factors are usually associated with tourism research that has specific tourist destinations. So, it can be said that the findings are in line with the concept described by Dann [7], the pull factor will help answer the reasons why someone chooses a tourist location. The driving factor is considered important in initiating the desire to travel, while the pull factor is considered more decisive in explaining destination choices [18]

Based on the results of the analysis presented in the previous discussion, there are several findings that can be used as inputs for tourism industry. Push motivation has a big role in determining what makes someone want to travel. Therefore, companies engaged in tourism must understand which factors have the most significant impact. Based on the loading factor score, Knowledge and novelty-seeking are the most powerful factors in push motivation. Departing from these findings, companies can design marketing strategies that carry the theme of knowledge and novelty seeking. For example, the use of marketing themes in the form of "Discover the Mystery ..." or "Feel the Exciting Adventure to ...". These themes can trigger a desire to seek knowledge and new things, as this is one of the main aspects of shaping push motivation.

In future studies, it is suggested to use a larger sample and ensure that the platform used to distribute questionnaires can reach the sample that better reflect the population. Further qualitative research is also needed so that more specific reasons about the differences in relations between variables could be known. This study merely answering the starting question of ‘what makes potential tourists want to travel’. If combined with a specific tourist destination that can be assessed by respondents, it will bring more insight of how a travel destination can design the right attributes and facilities. This study only provides a general overview of the potential tourist market in Indonesia, not yet specifying the deeper characteristics of the tourist market such as: whether the tourists are classified as solo travelers or group travelers; do these tourists use travel agents; whether the tourists are included in backpacker or flashpacking tourists, these further characteristics could be used to better explain the characteristics of the tourist market.

References

[1] World Tourism Organization. UNWTO Tourism Highlights. Madrid; 2016.
[2] Kim and J-H Noh (2004) Prediction of Travel Abroad: A Comparison of the Theory of Reasoned Action and Planned Behavior, International Journal of Tourism Sciences, 4:1, 1-16,
[3] Battour, M. M., Ismail, M. N., & Battor, M. (2017) Islamic tourism: an empirical examination of travel motivation and satisfaction in Malaysia, Current Issues in Tourism, 20:1, 50-67.
[4] Hanafiah, M. H. M., Rojulai, N., & Zulkifly, M. I. (2017). Tourist Motivation and Future Behavioral Intention: the Moderating Effects of the Push Factor. World Applied Sciences Journal 35 (Service Experience and Innovation in Hospitality & Tourism): 40-46
[5] Dean, D., & Suhartanto, D. (2019). The formation of visitor behavioral intention to creative tourism: the role of push–Pull motivation, Asia Pacific Journal of Tourism Research, 24:5, 393-403.
[6] Iso-Ahola, S. E. (1982). Toward a social psychological theory of tourism motivation: A rejoinder. Annals of Tourism Research, 9(2), 256–262.
[7] Dann, G. M. S. (1977). Anomie, ego-enhancement and tourism. Annals of Tourism Research, 4(4), 184-194.
[8] Uysal, M., & Jurowski, C. (1994). Testing the push and pull factors. Annals of Tourism Research, 21(4), 844–846.
[9] M. Yousefi & A. Marzuki (2015) An Analysis of Push and Pull Motivational Factors of International Tourists to Penang, Malaysia, International Journal of Hospitality & Tourism Administration, 16:1, 40-56,
[10] Ajzen, 1. (1985). From Intentions to Actions: A Theory of Planned Behavior. In Kuhl, J.; Beckman, J., eds. Action-Control: From Cognition to Behavior. Heidelberg, Germany: Springer.
[11] Chang, M. K. (1998). Predicting Unethical Behavior: A Comparison of the Theory of Reasoned Action and the Theory of Planned Behavior. Journal of Business Ethics, 17, 1825-1834.
[12] Sastre, R. P., & Phakdee-Auksorn, P. (2017) Examining Tourists' Push and Pull Travel Motivations and Behavioral Intentions: The Case of British Outbound Tourists to Phuket, Thailand, Journal of Quality Assurance in Hospitality & Tourism, 18:4, 437-464,
[13] Hsu, C. H. C., Cai, L. A. & Li, M. (2010). Expectation, Motivation, and Attitude: A Tourist Behavioral Model. Journal of Travel Research, 49(3) 282-296.
[14] Hair, J. F. J., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis. Englewood Cliffs, NJ: Prentice-Hall.
[15] Malhotra, N. (2010). Marketing research: An applied orientation. Englewood Cliffs, NJ: Prentice- Hall.
[16] Allman, Heather Renee, "Motivations and intentions of tourists to visit dark tourism locations" (2017). Graduate Theses and Dissertations. 15243.

[17] Sangpikul, A. (2009). A comparative study of travel motivations between Asian and European tourists to Thailand. Journal of Hospitality and Tourism, 7(1), 22–43.
[18] Crompton, J. L. (1979). Motivations for pleasure vacation. Annals of Tourism Research, 6(4), 408–424.
[19] Jang, S., & Cai, L. A. (2002). Travel motivations and destination choice: A study of British outbound market. Journal of Travel & Tourism Marketing, 13(3), 111-133.
[20] Sangpikul, A. (2009). Internationalization of hospitality and tourism higher education: A perspective from Thailand. Journal of Teaching in Travel & Tourism, 9(1-2), 2-20.
[21] Huang, S. (2010). Evolution of China's tourism policies. International Journal of Tourism Policy, 3(1), 78-84

5

Why Tax Incentives Needed to Develop Homestay Industry in Tourist Village: A Quintuple Helix Perspective

Haula Rosdiana[1a], Ayat Taufik Arevin[2], Murwendah[3]

[1,2,3]Department of Fiscal Administrative Science, Faculty of Administrative Science, Universitas Indonesia

[a)] Corresponding author: haula.rosdiana2013@gmail.com

Abstract

Admittedly, tourism is not merely aiming at encouraging the regional economy, but also preserving the surrounding environment and culture. In this context, the development of the homestay industry in tourist villages is essential. Homestay combines affordable lodging and authentic local cultural experiences and restores the Traditional Architecture of the Archipelago. Therefore, it is necessary to provide tax incentives as pull factors and economic, social, and political engineering to accelerate the development of the homestay industry in tourist villages. This study was conducted in Ubud, Bali's tourist village, employing a constructivist paradigm and collecting data through literature study, documentation study, FGD, and observation. This study concludes that a quintuple helix perspective is relevant to explain the urgency of providing tax incentives (to accelerate the homestay industry's development in tourist villages). Based on the quintuple helix perspective, as revealed by the study's finding, sustainable development is a primary goal. Thus, it is important to consider the long-term benefits of tax incentives comprehensively. Tax incentives shall certainly cause tax expenditure, either directly or subsequently, in a certain period. However, the lost potential of taxes shall be compensated through a multiplier effect in the form of not merely quantitative benefits, but also qualitative benefits such as cultural preservation, traditional architecture of the archipelago, local wisdom, and the achievement of sustainable development goals.

Keywords: tax policy, supply side tax policy, homestay, tourism village

1. Introduction

Culture and nature are the most significant potential for tourism in Indonesia. Thus, it is essential to integrate tourism development in Indonesia with cultural and environmental preservation programs. Community participation is necessary to ensure that tourism's positive impact shall be enjoyed widely and provide welfare for the entire community instead of merely a small number of people or a particular group. Following the vision of national tourism development, namely the realization of Indonesia as a world-class, competitive, and sustainable tourism destination capable of encouraging regional development and people's welfare, the development of community-based tourism (CBT) is one of the policy options. CBT requires three paradigms in tourism development, namely 1) ensuring economic sustainability, 2) socially acceptable, and 3) capable of maintaining environmental balance [1]. Thus, potential tourism objects have to be managed to attract foreign tourists to visit and consider the environmental balance, among others, by focusing on environmental sustainability.

The following are the forms of community participation in tourism development: (1) Community participation in planning. The community is involved in tourism development planning to explore the issues and potential of tourism in the community, including the challenges and opportunities faced; and (2) Community participation in management. This involvement can encourage the optimization of the role of the community as the subject of development and improve the economic independence of the community.

Homestay is one form of CBT currently being promoted by the government. Potential tourist objects, should managed properly, shall attract foreign tourists to visit, gather, be acquainted with each other and establish friendships among themselves; and maintain environmental balance by focusing on environmental sustainability.

The development of the homestay industry is greatly encouraged in developed and developing countries since it can accommodate community participation to play an essential role in developing their area, namely introducing and promoting their industry, culture, and nature worldwide. It also provides employment, reduces environmental degradation, decentralizes national income, and centralizes local resources in the national economy [2].

Instead of a commercialized hotel or motel, a homestay is a personal/private house rented by guests to live with the house owner in the comfort and security of a family. Lynch and MacWhannell, as quoted by Arevin (2014), state that "homestay accommodation is a term associated with a private house with a particular culture, interaction with a host or a family, every space becomes the public area [2].

Thus, far, the government has not provided tax incentives for developing the homestay industry in tourist villages. Tax incentives are required as political, social, and economic engineering [3]. Therefore, this study aims to explain the importance of tax incentives for developing the homestay industry in tourist villages.

2. Research Method

This study, conducted in Ubud, Bali, employed the constructivist paradigm and collected the data through literature study, documentation study, Focus Group Discussions with various stakeholders, and observation by utilizing the method of the observer as participant. This study applied a quintuple helix perspective to observe the impact of providing tax incentives on the development of the homestay industry in tourist villages more comprehensively by observing the elements of sustainable development and social ecology. Quintuple Helix (Carayannis & Campbell, 2012) is based on the Triple Helix and Quadruple Helix, a 'five-helix model' that includes 'natural environment' as the fifth Helix. Quintuple Helix can be proposed as a framework for the transdisciplinary (and interdisciplinary) analysis of sustainable development and social ecology [4].

3. Results and Discussions

The Ministry of Tourism states that the development scheme of homestay is divided into four types as follows: (1) conversion, improving the quality of the interior of buildings that have met the physical criteria of a homestay; (2) renovation, repairing or improving the existing homestay to improve the quality; (3) revitalization, revitalizing an area or part of the city that was once vital, but then suffered from degradation. Revitalization is divided into macro and micro levels where the Ministry of Tourism focuses on micro-scale revitalization, namely for traditional houses; and (4) new construction, building homestays in a vacant lot by applying Traditional Architecture of the Archipelago or other products/models using local materials [5].

The Ministry of Tourism is targeting the development of 7,000 homestays by 2019. In previous years, specifically in 2017-2018, approximately 3,000 homestays have been developed. The Development Acceleration Team for Homestays in Tourist Villages of the Ministry of Tourism claims that the development in the current year is divided into four schemes, namely conversion of 4,900 rooms (70%), renovation and revitalization of 1,750 units (25%), and construction of 350 new units (5%) [6]. The acceleration to achieve these targets is carried out in various ways, including through fiscal policy. Fiscal policy has 3 (three) main components, namely a) spending policy - for example through the government budget, b) financing policy, and c) tax policy - through tax incentive policies or various tax policies leading to supply side tax policy. An example of financing policy is the collaboration between the Ministry of Tourism and PT Sarana Multigriya Financial (Persero) related to partnership credit to support the development of Homestay or *Pondok Wisata* in Kuta Village Hall, Lombok [7].

Basically, tax incentive policy for the development of homestay industry in tourism villages in the perspective of quintuple helix aims to create sustainable development (see Figure 1). Sustainable development is the development that meets current needs without compromising the ability of future generations to meet their own needs.

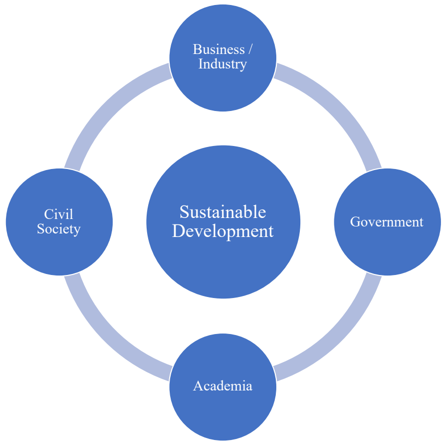

Figure 1. Tax incentive policy for the development of homestay industry in tourism villages in the perspective of quintuple helix aims

Providing tax incentives shall basically assist homestay entrepreneurs in reducing costs of taxation that distort productivity (see Figure 2).

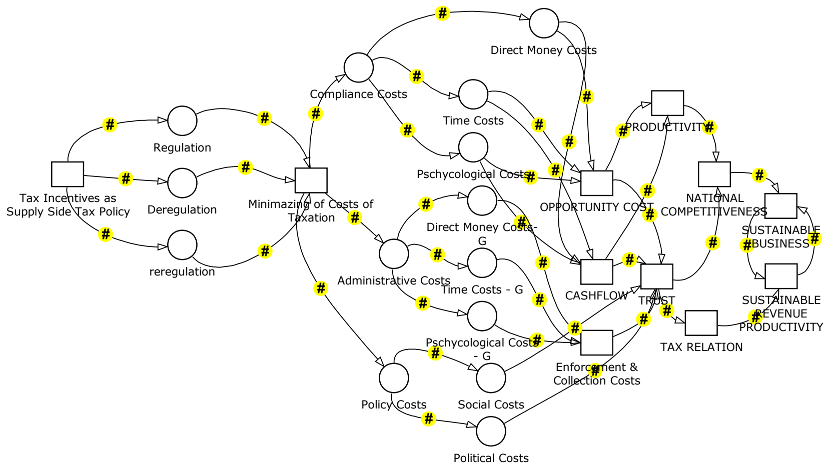

Figure 2. Causal loops diagram of proposing tax incentives for homestay entrepreneurs

Tax incentives can be provided by considering homestay business processes since each process has different tax incentives requirements. For example, the incentives required for the construction of traditional houses are different from the incentives required to manage the homestay industry. Unlike other regions, Bali's architecture is well preserved, hence its possibility of long-term preservation. Meanwhile, a significant number of traditional houses in other areas are almost extinct. Therefore, the Ministry of Tourism attempts to preserve them through the construction or development of traditional houses, even holding a contest for traditional houses' design as presented in Figure 3.

Currently, the construction and development of traditional houses have taxation implications, including:

1) Central Tax, namely:
   a. Value Added Tax (VAT) on the construction of buildings by the legal owners or VAT on construction services (supposing the construction is carried out by a third party);
   b. Article 23 Income Tax on construction services (supposing the construction is carried out by a third party), comprising: 4% (four percent) of the gross amount obtained by the Taxpayer providing construction planning services; 2% (two percent) of the gross amount obtained by the Taxpayer providing construction services; or 4% (four percent) of the gross amount obtained by the Taxpayer providing construction supervision services.
2) Regional Tax and Retribution, including Building Construction Permit.

Figure 3. The design of traditional houses in Padang

The central government can provide tax incentives through exemption from VAT and Income Tax on the construction and development of traditional houses for homestays in Tourist Villages. The simulation of the impact of the incentives on cash flow is qualitatively illustrated in Figure 4.

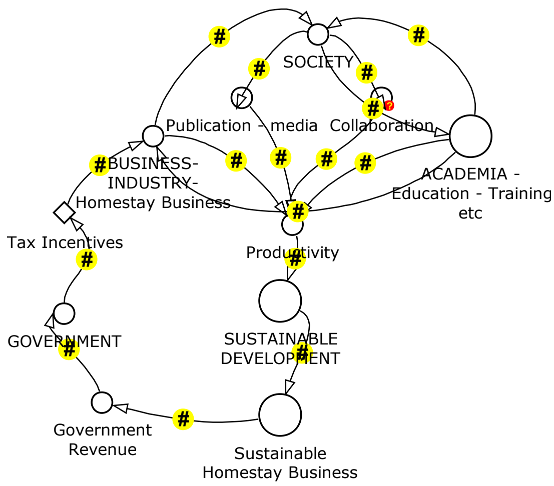

Figure 4. Causal loops diagram of the impact of the incentives on cash flow

4. Conclusions

It is essential to consider the long-term benefits of tax incentives comprehensively. Tax incentives shall certainly cause tax expenditure, either directly or subsequently, in a certain period. However, the lost potential of taxes shall be compensated through a multiplier effect in the form of not merely quantitative benefits, but also qualitative benefits such as cultural preservation, traditional architecture of the archipelago, local wisdom, and the achievement of sustainable development goals. In the context of the construction and development of traditional houses for homestays in Tourist Villages, exemption from VAT and Income Tax can be provided to assist in accelerating the construction and development of 7,000 homestay rooms targeted by the government by 2019.

References

[1] Arevin, A. T. (2014). Empowerment of Coastal Tourism Cottage Business Owners in Five National Tourism Strategic Areas (*Pemberdayaan Pemilik Usaha Pondok Wisata Pesisir di Lima Kawasan Strategis Pariwisata Nasional*). A Dissertation, Graduate Program of Bogor Institute of Agriculture.

[2] Arevin, A. T., Sarna, M. M., Asngari, P. S., & Mulyono, P. (2014). The Empowerment Model of Coastal Homestay Business Owners in Five Strategic Areas of National Tourism. *Bisnis & Birokrasi Journal*, 21(1), 9-16.

[3] Rosdiana, H., & Slamet, E. (2011). Pengantar Ilmu Perpajakan Kebijakan dan Implementasi di Indonesia. *Jakarta: Grafindo.*

[4] Carayannis, E. G., Barth, T. D., & Campbell, D. F. (2012). The Quintuple Helix innovation model: global warming as a challenge and driver for innovation. *Journal of innovation and entrepreneurship*, 1(1), 2.

[5] The Ministry of Tourism of the Republic of Indonesia. (2017). Vision and Mission of The Ministry of Tourism of the Republic of Indonesia, Homestay and Progress of Homestay (*Visi Misi Kemenpar, Homestay dan Progress Homestay*). Retrieved from http://www.kemenpar.go.id/post/visi-misi-kemenpar-homestay-dan-progress-homestay

[6] Anggraini, R. G. (2019). The Ministry of Tourism of the Republic of Indonesia Targets Develop 7,000 Homestay Rooms This Year (*Kemenpar Target Kembangkan 7.000 Kamar Homestay Tahun Ini*). Retrieved from https://katadata.co.id/berita/2019/02/20/kemenpar-target-kembangkan-7000-kamar-homestay-tahun-ini

[7] The Ministry of Tourism of the Republic of Indonesia. (2019). Press Release: The Ministry of Tourism Cooperates with SMF Financial Institutions to Encourage Homestay Financing in Mandalika NTB (*Siaran Pers: Kemenpar Gandeng Lembaga Keuangan SMF Dorong Pembiayaan Homestay di Mandalika NTB*). Retrieved from http://www.kemenpar.go.id/post/siaran-pers-kemenpar-gandeng-lembaga-keuangan-smf-dorong-pembiayaan-homestay-di-mandalik

6

The Role of Philoxenia and Value Co-Creation on Re-Visit Intention

Okki Trinanda[1a], Astri Yuza Sari[2]

[1,2]Faculty of Economics, Universitas Negeri Padang, Indonesia

[a)] Corresponding author: okki.trinanda@fe.unp.ac.id

Abstract

Tourism. In the tourism sector, the term Philoxenia means the attitude of receiving tourists with all their hearts that exceeds hospitality. The respondent of this research was the tourist that has visits West Sumatera cities and regencies more than once (repeat visitors). During the data collection, 500 respondents were asked to fill the questionnaires. The data was then crunched with Structural Equation Model (SEM) to test the hypotheses. The results show: (1) Philoxenia has a positive and significant effect towards Value Co-Creation, and (2) Both Philoxenia and Value Co-Creation has positive and significant effect towards Re-Visit Intention. This research has an implication on hospitality management and creating values in tourism marketing, especially in West Sumatera.

Keywords: Re-Visit Intention, Philoxenia, Value Co-Creation

1. Introduction

The tourism sector in West Sumatra is projected to generate significant regional income. In 2019, the Provincial Government of West Sumatra set a target of 57,087 foreign tourists and domestic tourists of 8,476,724. West Sumatera's tourism potential drove the policy and strategy; it is known as an area that has many tourist destinations and a friendly community [1]. Some famous tourist destinations in West Sumatra, including in the city of Bukittinggi, which offers the *Jam Gadang* (the classic Dutch built clock tower), *Lobang Jepang* (Japanese cave), and other internationally recognized areas like Mentawai Island and Mandeh Beaches [2].

It is coupled with various culinary attractions backing up the tourism sector, such as famous *Rendang*, *Kerupuk Sanjai* (Cassava Cracker), and other local delicacies. To exploit this great potential, tourism practitioners should be able to drive these visitors to return in the future, or revisit intention. With this, the tourism sector would be more advanced and automatically bring progress to the economic sector of society [3].

The ability of tourism practitioners to encourage re-visit intention will positively impact the economic situation. For example, the PAD (local revenue) of the tourism sector in 2018 increased by 20.92%, from $ 875.44 in 2017, it became $ 10,509.17 in 2018. One of the keys to success in tourism development is the ability to encourage the re-visit intention of its tourists. Therefore, it is necessary to do further studies to understand the re-visit intention of tourists to West Sumatra.

Based on research by Mijnheer and Gamble [4], it was found that one of the determinants of re-visit intention was people's attitude in accepting tourists. In this case, the researchers agreed to give the term Philoxenia to explain this. The term Philoxenia itself comes from the Greek language, which means "friend to a stranger" [5]. But in its application, the term has a deeper meaning.

During Ancient Greece, hospitality to guests/foreigners was one of the important virtues in people's lives. If a visitor arrives, the host will immediately offer food, bed, and bath, even before the visitor asks [6]. For the people of Greece, visitors' comfort is very guarded and made the number one priority. Conversely, visitors are also expected always to be polite and maintain ethics while visiting there [5].

Therefore, in the tourism sector, the term Philoxenia means the attitude of receiving tourists with all their hearts. The attitude of acceptance in practice exceeds hospitality [7]. People who have philoxenia will attach great importance to tourists' comfort while visiting their tourist areas. Therefore, philoxenia in tourism is more than hospitality shown by the community. Philoxenia also includes the desire of the community to provide everything that is best for tourists. The community helps with all their hearts so that all the needs of tourists can be met very well [5]. Vice versa, tourists, are also expected to maintain good manners and uphold the values found in the community.

Furthermore, another factor that can encourage re-visit intention is value co-creation [4]. This term describes a marketing strategy where consumers participate in creating existing values in tourism destinations. This means that consumers are no longer seen as being passive, or only receive various kinds of supplies from tour managers or the public, but also actively participate in creating tourism values [8].

Based on the study of Mijnheer and Gamble [4], value co-creation in tourism can be an active effort of tourists in maintaining cleanliness and environmental preservation, providing input for tourism development, and introducing the tourist destination to other potential visitors. The active involvement of these tourists will cause a feeling of emotional attachment between the tourists and the tourist attractions to encourage them to return again [9].

In this article, the authors use these two variables, which are used as hypothesized variables to influence Re-Visit Intention in West Sumatra. This research will contribute to tourism development, especially in finding the right model in encouraging the Re-Visit Intention of tourists.

Philoxenia is a relatively new concept in the field of tourism marketing, so researchers are still very rarely discussing the theme. Therefore, tourism research that addresses Philoxenia in Indonesia so far has never been done. Tourism academics in Indonesia are currently more inclined to discuss hospitality, where Philoxenia is in practice improvement of the concept. Therefore, this article is the first article that introduces the concept of Philoxenia academically in Indonesian tourism.

2. Literature Review

2.1 Re-Visit Intention

Re-visit intention is a form of behavior (behavioral intention) or the desire of customers to come back, stay longer than expected, shop more than expected [10]. Interest in consumer behavior in buying or using services from the same service provider is strongly influenced by the experience of satisfaction with the services provided previously [8]. Re-visit intention is defined as the desire or plan of consumers to make a return visit to the same place [11]. In this study, the definition of re-visit intention is defined as the desire or plan of consumers to return to West Sumatra after the positive Philoxenia and Value Co-Creation.

2.2 Philoxenia

The beginnings of hospitality for guests can be traced back centuries, to a term known as "Philoxenia". This term is used by the Ancient Greek community who treat visitors as "friends" rather than just "guests" [7]. This concept in its application exceeds that of hospitality, which is now more due to the motives of commercialization [6]. Philoxenia emphasizes the desire of the host to treat visitors as comfortable as possible [5]. Therefore, Philoxenia can be said to be the most generous and benevolent form of hospitality.

The hospitality of the hosts, including the people, tour service providers, tour staff, hotels and others, all take part in Philoxenia's practice. West Sumatra itself, with the majority of people with Minangkabau ethnicity, has long been known for its hospitality and sincere desire to please guests [12]. Therefore, in this study, the authors use Philoxenia as a variable, causing re-visit intention rather than hospitality.

Philoxenia can also be applied by encouraging the attachment of tourists when visiting. People who have Philoxenia are also more open to various input and participation from visitors [5-7]. Therefore, it is argued that Philoxenia also a cause of co-creation. Thus, the following hypothesis are formulated.

H1 : Philoxenia has a positive and significant effect on West Sumatera's tourist Value Co-Creation

H2 : Philoxenia has a positive and significant effect on West Sumatera's tourist Re-Visit Intention

2.2 Costumer Co-Creation

In the era of new wave marketing, the producers can create together with consumers in the practice of developing co-creation products that are dynamic, interactive and based on multiple sources where there is a process related to value creation that is no longer just coordinating everything related to quality, cost, and delivery but must be done collaboratively [4]. The success of new products is not only influenced by product quality but also market conditions, target customer selection, even product launch times, and market conditions. In the process of product development in the new wave marketing era, the company tries to create together with experts who can identify and create quality products. Rubio et al. [8] argue that if the company has run the co-creation process well, then the value of the product will be better than the product produced.

In the tourism sector, value co-creation means creating positive values and the participation of tourists [9]. Tourists can do this by maintaining cleanliness, providing input on developing tourist destinations, and promoting them to other potential tourists.

H3 : Value Co Creation has a positive and significant effect on West Sumatera's tourist Revisit Intention

2.3 Research Model

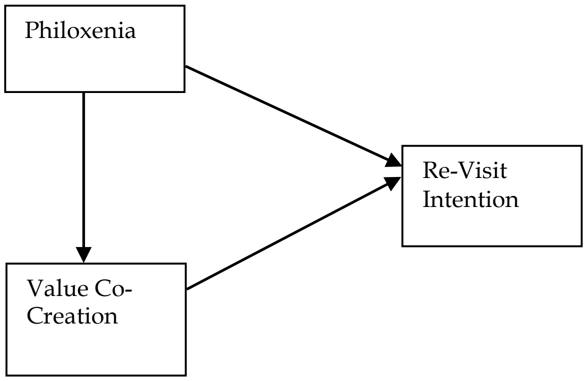

Figure 1. Research Model

3. Research Method

This study population comprises all regencies and cities in West Sumatra, which have tourist destinations, namely 19. Of this population, a purposive sample of 2 regencies and two cities has been set, namely: 1. Bukittinggi City, 2. Padang City, 3. Tanah Datar District and 4. Regency of 50 Kota. Then determined purposively, the tourist destinations of each sample city/district

While the research respondents were tourists visiting tourist destinations in the sample cities/regencies. The number of respondents was determined by 500 people proportionally in each sample Regency/City. Meanwhile, the sampling technique (respondents) at each tourist destination was carried out using the Accidental method of distributing the research questionnaire to the visiting tourists who happened to be found during the research.

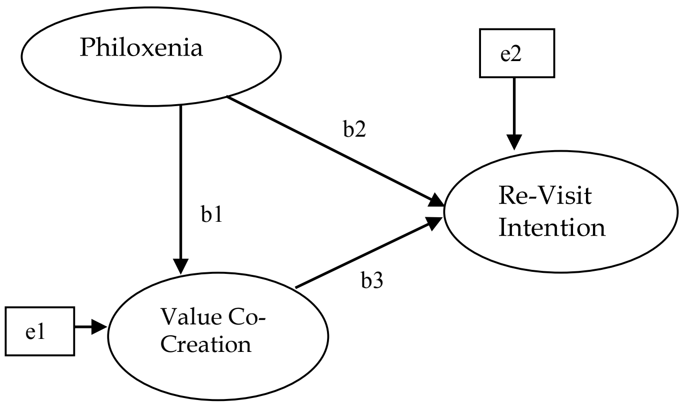

Figure 2. Research Model

This research used covariance-based SEM using AMOS 24 software as an analysis tool. The goodness of fit of the data obtained this study measured by some criteria such as CMIN / DF ≤5, GFI, CFI, large TLI equal to 0.90, and RMSEA ≤0.08. Before conducting the primary analysis, this study first conducted several tests on data such as normality, heteroscedasticity, multicollinearity, and also will use bootstrapping with 5000 re-sampling to overcome these problems. Furthermore, because this research uses self-report in data collection, it certainly will face a common method bias problem. This study uses Harman's single factor method to test the common method bias problem.

4. Results and Discussions

The results of data processing using SEM produces the following model

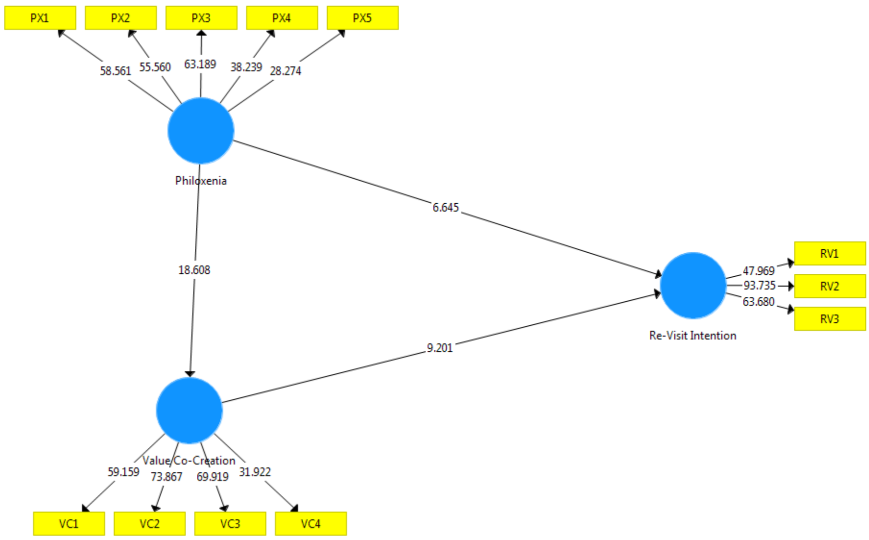

Figure 3. Results

While the data processing output table is as presented below:

Table 1. T Statistics

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Philoxenia -> Re-Visit Intention	0.278	0.280	0.042	6.645	0.000
Philoxenia -> Value Co-Creation	0.576	0.578	0.031	18.608	0.000
Value Co-Creation -> Re-Visit Intention	0.410	0.411	0.045	9.201	0.000

4.1 The Effect of Philoxenia On West Wumatera’s Tourist Value Co-Creation

Based on data processing, it was found that the P-Value of Philoxenia's influence on Value Co-Creation was 0,000. This value is smaller than 0.05, which means that Philoxenia has a significant effect on Value Co-Creation. Furthermore, it also found that the Original Sample value in this relationship is 0.576, which means that the relationship is positive. It can be translated that, an increase in Philoxenia would also cause an increase in Value Co-Creation. Thus, it can be concluded that the first hypothesis in this study is accepted.

Philoxenia can be interpreted as the host behavior that treats tourists as well as possible. Therefore, it is only natural that hosts who have high Philoxenia will provide opportunities for tourists to contribute to the development of their tourism. The synergy between the two parties, namely hosts and tourists, will produce better values than before. Therefore, if West Sumatra tourism wants to encourage Value Co-Creation with tourists, the strategy can be started by improving Philoxenia first. This research is in line with the results of the study [3, 4, 8-10, 13, 14].

4.2 The Effect of Philoxenia On West Wumatera's Tourist Re-Visit Intention

Based on data processing, it was found that the P-Value of Philoxenia's influence on Re-Visit Intention was 0,000. This value is found to be smaller than 0.05, which means that Philoxenia has a significant effect on Re-Visit Intention. Furthermore, it also found that the Original Sample value in this relationship is 0,278, which means that the relationship is positive. It can be translated that an increase in Philoxenia would also cause an increase in Re-Visit Intention. Thus, it can be concluded that the second hypothesis in this study is accepted.

As stated earlier, Philoxenia is a tourist host attitude that treats tourists as well as possible. So, when viewed from the perspective of tourists, this is something that is very good and will cause satisfaction from within the tourists. Furthermore, suave attitude and proper treatment of families obtained during a tour will cause emotional bonds between tourists with hosts and tourist destinations. Naturally, tourists who receive high Philoxenia treatment will feel attracted to continue to revisit the tourist destination. This research is in line with the results of the study [5, 7, 14-16].

4.3 The Effect of Value Co Creation on West Sumatera's Tourist Re-Visit Intention

Based on data processing, it was found that the P-Value of Value Co-Creation's influence on Re-Visit Intention was 0,000. This value is found to be smaller than 0.05, which means that Value Co-Creation has a significant effect on Re-Visit Intention. Furthermore, it also found that the Original Sample value in this relationship is 0,410, which means that the relationship is positive. It can be translated that an increase in Value Co-Creation would also cause an increase in Re-Visit Intention. Thus, it can be concluded that the second hypothesis in this study is accepted.

Value Co-Creation means providing opportunities for tourists to contribute to the development of tourism. This role can be carried out by providing valuable input and promoting these attractions to colleagues. Therefore, for a tourist who has contributed, he will feel partly responsible and want to know how the next development will be, especially after the contribution he has made. So naturally, it would be if a tourist place with a high-Value Co-Creation will encourage the tourists to re-visit the tourist destination. This research is in line with the results of the study [4, 8, 14, 17-20]

5. Conclusions and Suggestions

Based on the discussion that has been presented above, it can be concluded that Philoxenia has a positive and significant influence on West Sumatera tourist Value Co-Creation. Both Philoxenia and Value Co-Creation have a positive and significant influence on West Sumatera tourist Re-Visit Intention. Of the two variables tested, Value Co-Creation has a more substantial influence on West Sumatera tourist Re-Visit Intention. Therefore, to increase Revisit Intention, it is suggested to West Sumatera government and tourism managers to improve Philoxenia and Value Co-Creation.

References

[1] Y. Wardi, A. Abror, and O. Trinanda, "Halal tourism: antecedent of tourist's satisfaction and word of mouth (WOM)," *Asia Pacific Journal of Tourism Research,* vol. 23, pp. 463-472, 2018.

[2] O. Trinanda and P. D. Mutaqin, "The Influence of Electronic Word of Mouth Toward Destination Trust and Travel Intention on Sirandah Island in Padang City," *Eco-Buss,* vol. 1, 2019.

[3] H. Han and S. S. Hyun, "Customer retention in the medical tourism industry: Impact of quality, satisfaction, trust, and price reasonableness," *Tourism Management,* vol. 46, pp. 20-29, 2015.

[4] C. L. Mijnheer and J. R. Gamble, "Value co-creation at heritage visitor attractions: A case study of Gladstone's Land," *Tourism Management Perspectives,* vol. 32, 2019.

[5] P. Christou and R. Sharpley, "Philoxenia offered to tourists? A rural tourism perspective," *Tourism Management,* vol. 72, pp. 39-51, 2019.

[6] Anonymous. (2016). *The True Meaning of Philoxenia*. Available: https://www.mysteriousgreece.com/2016/05/true-meaning-philoxenia/

[7] L. Kamperidi, "PHILOXENIA AND HOSPITALITY+ CLASSICAL AND BIBLICAL CONTEXTS," *PARABOLA-MYTH TRADITION AND THE SEARCH FOR MEANING,* vol. 15, pp. 4-13, 1990.

[8] N. Rubio, N. Villaseñor, and M. J. Yagüe, "Creation of consumer loyalty and trust in the retailer through store brands: The moderating effect of choice of store brand name," *Journal of Retailing and Consumer Services,* vol. 34, pp. 358-368, 2017.

[9] C. X. Zhang, L. H. N. Fong, and S. N. Li, "Co-creation experience and place attachment: Festival evaluation," *International Journal of Hospitality Management,* vol. 81, pp. 193-204, 2019.

[10] D. Lesakova, "Composite Evaluation of Customer Satisfaction," *Bucharest University of Economic Studies Publishing House,* vol. 168, 2015.

[11] C. Tosun, B. B. Dedeoğlu, and A. Fyall, "Destination service quality, affective image and revisit intention: The moderating role of past experience," *Journal of Destination Marketing & Management,* vol. 4, pp. 222-234, 2015.

[12] S. Evanita and O. Trinanda, "Pengaruh Atribut Produk Terhadap Minat Beli Makanan Ringan Tradisional Pada Remaja Di Perkotaan Sumatera Barat," *Economac: Jurnal Ilmiah Ilmu Ekonomi,* vol. 1, pp. 7-11, 2017.

[13] H. Chen and I. Rahman, "Cultural tourism: An analysis of engagement, cultural contact, memorable tourism experience and destination loyalty," *Tourism Management Perspectives,* vol. 26, pp. 153-163, 2018.

[14] L. T. Thuy, T. M. T. Pham, and L. T. Le, "E-satisfaction and continuance intention: The moderator role of online ratings," *International Journal of Hospitality Management,* vol. 77, pp. 311-322, 2019.

[15] K. F. Yuen and V. V. Thai, "Service quality and customer satisfaction in liner shipping," *International Journal of Quality and Service Sciences,* vol. 7, pp. 170-183, 2015.

[16] V. V. Kaura, C. S. D. Prasad, and S. Sharma, "Service quality, service convenience, price and fairness, customer loyalty, and the mediating role of customer satisfaction," *International Journal of Bank Marketing,* vol. 33, pp. 404-422, 2015.

[17] R. Sindwani, " Technology-Based Self-Service Banking Quality Dimensions, Customer Satisfaction, and Loyalty: Linkages and Implications for Management. In Optimizing Current Practices in E-Services and Mobile Applications," *IGI Global,* pp. 139-159, 2018.

[18] R. Oliver, *Satisfaction: A Behavioral Perspective on the Consumer*. New york: McGraw-Hill, 1997.

[19] A. Abror, Y. Wardi, O. Trinanda, and D. Patrisia, "The impact of Halal tourism, customer engagement on satisfaction: moderating effect of religiosity," *Asia Pacific Journal of Tourism Research,* vol. 24, p. 633643, 2019.

[20] O. Trinanda and A. Y. Sari, "#MeTourism: How selfies affect re-visit intention in narcissistic age," in *the 1st International Conference on Economics, Business, Entrepreneurship, and Finance (ICEBEF 2018)*, Bandung, Indonesia, 2019.

7

Causality of Tourist Utility and Tourism Expense in The Tourism Object of Padang City: (Simultaneous Equation Model Approach)

Hasdi Aimon[1a], Dewi Zaini Putri[2], Hari Setia Putra[3]

Faculty of Economics, Universitas Negeri Padang, Padang, Indonesia

a) Corresponding author: hasdi_aimon@fe.unp.ac.id

Abstract

This paper aims to explain the effect of economic activity, the role of government and visitor utilities on tourism costs in the city of Padang. In other hand, it also explains the influence of tourism products, tourism integration and tourism costs on utility visitors in the city of Padang. Data is obtained based on observations to visitors and tourism actors with the same number of samples, using the accidental sampling method. The analysis model uses simultaneous equations. The research findings show that tourism costs and visitor utility have a significant reciprocal relationship. Economies activities and utilities of visitor have a significant effect on tourist costs, as well as tourist attraction and tourism costs have a significant effect on visitor utility. This research recommends the Padang City Tourism Office to increase the government's role in relation to the quality of tourism products through training and tourism assistance activities in Padang City.

Keyword: Visitor utilities, Tourism Costs, tourist integration, simultaneous equations.

1. Introduction

In conducting a tour of interest in increasing tourism productivity, the research agenda of the United Nations World Tourism Organization (UNWTO) has given special attention to tourism productivity [1]. Overall, tourism activity wants to increase productivity to produce higher output; the government's goal is trying to increase the production of the tourism market to drive economic growth. From tourism, activity became an excellent opportunity sector for the government as one of the ways to increase economic growth. Mostly in this word, tourism is an expected sector that can be developed.

The development of integrated tourism objects positively impacts the economy around the Integrated Tourism Area [1] This is supported by improved infrastructure and control by the local government to make that integrated tourism objects are well managed. This condition utilized by business actors working as their primary occupation, more than 50% responsive, making it their main job (survey data). This research explained that infrastructure was the government's main effort to make tourism objects integrated. However, this research didn't mention how this infrastructure funded, government-funded, or private-funded. But from this we know, infrastructure is essential to develop the tourism object.

Integrated tourism in Indonesia, especially West Sumatra precisely in Padang City has a variety of types of tours that are presented, in the Padang City there is integrated tourism object namely Pantai Padang, Gunung Padang and Pantai Air Manis (DPM & PTSP West Sumatera Province).

Padang City is the capital of West Sumatera Province which is located on the west coast of the island of Sumatera with an area of 694.96 KM^2. where the western region directly borders the Indian ocean. Padang City is one of the favorite tourist destinations, especially on the Pantai Padang. Pantai Padang offers sunset views which are so awaited by tourists, besides that Pantai Padang is very equipped with a variety of interesting culinary originating from West Sumatera itself. The beauty of nature in the Padang City is not only on the Pantai Padang, there is also a beach that is a tourist destination, namely Pantai Air Manis, where there is a legend of the Malin Kundang stone that attracts tourists. In addition to the beach which is a tourist destination, the nature can also be enjoyed by visiting the attractions of Gunung Padang which located between Pantai Padang and Pantai Air Manis.

The government of Padang City also supports the existence of a sustainable integrated tourism design, by improving and developing tourism areas to be better, so that they can become an attraction for domestic and foreign tourists. Based on observations made in March 2019 on the tourism object of Pantai Padang, Gunung Padang, and Pantai Air Manis that there are still no modes of transportation available to go between these tourism object, this is due to the lack of level of accessibility to these attractions. Very in need of an adequate mode of transportation to support the development of integrated tourism object.

Public transportation that cannot yet access tourism object integration, such as Pantai Air Manis which has a not-so-large entrance that causes vehicles such as tourism buses or private vehicles that are still difficult to pass through the road. The lack of adequate access makes it difficult for tourists to visit these three tourism object integration.

The roadmap that is still not available has hampered the development of tourism, so it is very necessary to make tourism objects exposed and visited by both local and foreign tourists. The role of government is needed in making instructions between objects making it easier for tourists to find tourist destinations in Padang City. The main of transportation facilities are private cars (around 52%) while public transportation (both local and long distance) is only used in about 6% of cases [2].

2. Literature Review

Tourism development is positively related to economic growth [1]. Several studies have examined how productivity affects the economy at large. Research conducted by [3] that there is a multiplier effect in the integrated tourism object which has an impact on the economy in that area. Other studies also found by (Afriwanda & Zulkifili, 2017) that for the influence of the tourist area on people's income contained in the tourism object. With an increase in the number of visitors will be able to contribute to businesses that are located in the tourism area.

According to [4] the economic movement of the food industry in the integrated tourism area. Tourism products which are packaged by business actors are a special attraction for visitors. This makes the food industry in the region also developed.

[2] Schiefelbusch, Jain, Schäfer, & Müller, (2007) put forward the concept of *travel chain* introduced as a way to create sustainable tourism products. This *travel chain* combines travel and tourism activities, with particular attention to *transit areas.*

3. Research Method

This research was conducted on tourism object that are included on Integrated Tourism Area (KWT) in Padang City namely Pantai Padang, Gunung Padang and Pantai Air Manis. The object under study is business actors or traders and tourists that visited tourism object. Data were obtained from surveys of businesses actors and visitors by using questionnaires and interviews. The variables that are the object of this research are the economic activity (X1), the role of government (X2), tourism promotion (X3), tourism object integration (X4), tourism expenses (Y1) and visitor utility (Y2).

The research sample was selected based on accidental sampling technique with analysis using the simultaneous equation approach model. This study aims to examine whether there is a reciprocal relationship between tourism expenses and visitor utilities. In addition, this study also looks at the effect of economic activity and the role of government on tourism expenses, as well as the influence of tourism promotion and tourism object integration on visitor utilities will used OLS (Ordinary Least Square) includes the t-Statistics test (Partial Test) and the f-Statistics test. However, before the whole series of tests is conducted first, Level of Respondents Achievement (LRA) test is carried out. LRA analysis aims to describe the characteristics of each research variable. Level of Respondents Achievement can be classified into the following groups:

Table 1. Level of Respondents Achievement Criteria

No	LRA	Criteria
1	< 56%	*Not Good*
2	56% - 75%	*Good Enough*
3	76% - 100%	*Good*

In addition, in this study, the foundation of thinking is as illustrated by Figure 2 below:

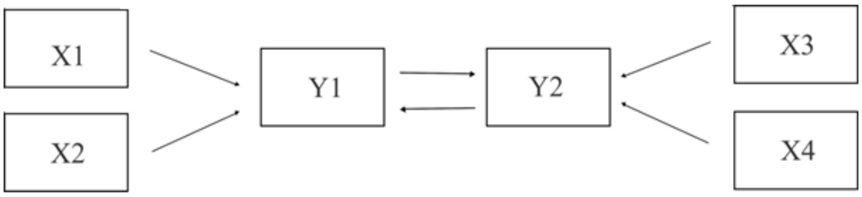

Figure 2. Conceptual Framework

Based on the above framework, an equation model can be formed as follows:

$$Y1 = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 Y_2 + \varepsilon_1 \quad (1)$$

$$Y_2 = \beta_0 + \beta_1 X_3 + \beta_2 X_4 + \beta_3 Y_1 + \varepsilon_2 \quad (2)$$

Where:

α, β, γ : Regression Coefficients
Y1 : Tourism Expenses
Y2 : Visitor Utility
X1 : Economic Activity
X2 : The Role of Government
X3 : Tourism Promotion
X4 : Tourism Object Integration
ε_1 ε_2 : Error Disturbance

Equation (1) aim to see the relationship and effect of economic activity, the role of government and visitor utility to tourism expenses. While Equation (2) aim to see the relationship and effect of tourism promotion, tourism object integration and tourism expenses to visitor utility. The variable used in this study is a variable that is the result of a survey with the type of ratio data.

Table 2. Definition of Variable Operations

Variable	Definition
Tourism Expenses	Tourism expenses variable is perception tourism business actors and visitors that explains the total tourist expenses incurred by tourists when traveling with indicators of transportation costs, accommodation, consumption, to the cost of recreation itself.
Visitor Utility	Visitor utility variable is perception from tourist that describe the satisfaction of tourists both before visiting and after visiting the tourism integrated city tour of Padang City.
Economic Activity	Economic activity variable is the perception of tourism business actors which explains the development of economic activity of business actors or traders.
The Role of Government	The role of government variable is the perception from tourism business actors and visitor which illustrates the extent of the government's role in developing integrated tourism objects in the city of Padang with indicators of the role of government, investment and assistance from the government, related agencies or other loan institutions.
Tourism Promotion	Tourism promotion is the perception of tourism business actors and visitor about promotion of Integrated Tourism Area (KWT), cooperation between government and public and promotion can be used for family meetings.
Tourism Object Integration	The tourism object integration variable is the perception of tourism business actors and visitor regarding the integration of transportation, connectivity between tourism objects and tourism roadmap.

4. Results and Discussion

4.1 Level of Respondents Achievement

The result of data processing showed the LRA for economics activity, the role of government, tourism promotion and tourism object integration has LRA value are 75.52 percent, 60.64 percent, 76.43 percent and 70.68 percent. Which is all of this variable is in good enough criteria.

But the result of LRA for tourism expenses and visitor utility indicated in not good criteria, where the result of data processing showed the value of this variable only 55.85 percent.

4.2 Result Analysis

The following Table 3 presents the result analysis of the influence economic activity (X1), the role of government (X2) and visitor utility (Y2) to tourism expense (Y1).

Table 3. Model Estimation Results (1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.370902	0.109862	3.376068	0.0012
X2	0.006352	0.089142	0.071253	0.9434
Y2	0.403302	0.122006	3.305598	0.0014

Source: Author`s Processed Results

Thus the equation model can be arranged as follows:

$$Y_1 = 0.370902X_1 + 0.006352X_2 + 0.403302Y_2$$

From table, above it can be see variable of economic activity and visitor utility has positive and significant influence to tourism expenses. And the role of government has positive but not significant influence to tourism expense.

The tourism expense in the tourism objects of Pantai Padang, Gunung Padang, and Pantai Air Manis is still relatively high. This makes it a problem in making a visit to the place. The price of the product is still relatively high for the visitors, besides that, there are also relatively cheap tourism expenses, such as the entrance ticket to Pantai Padang and the parking fee at Pantai Padang. Business actors or traders who are in the vicinity of tourism object require attention from the local government to manage the layout of the merchants so that they can give a good impression of the management of tourism objects. And the government also regulates the highest retail prices sold so that visitors do not object to the costs incurred in conducting tours.

The government has provided guidance to traders who are in tourism objects to innovate tourism products that are sold and also guidance to the price of products sold, but this has a sustainable effect on traders. This is because most of these traders are their main day to day work. Therefore, the price of the product is higher than usual compared to other places.

The economic activities of the people who are around the attractions seem to be helped by the development of attractions that have been managed by the local government. After the development and improvement of the tourist attraction, this makes the number of tourist arrivals increase and will have an impact on the economy of the community. Economic activity is increasing and bringing prosperity to the local community.

It can be seen from the equation above that economic activity influences the tourism expense, if the tourism expense increases, the economic activity of the people will also increase. This of course has a positive impact on the economy of the surrounding community. Likewise, with the visitor's utility which gives an influence on the tourism expense. However, it is different from the role of government which does not have a significant influence on tourism expenses. This is consistent with the situation in the field that was observed that the absence of the government's role in addressing the problem of the high cost of tourism products makes prices increasingly out of control. Business capital that comes from the private sector makes business people as price takers which causes high prices for tourism products.

The following Table 4 presents the result analysis of the influence tourism promotion (X3), tourism object integration (X4) and tourism expense (Y1) to visitor utility (Y2).

Table 4. Model Estimation Results (2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X3	-0.002770	0.150860	-0.018359	0.9854
X4	0.500505	0.138187	3.621931	0.0005
Y1	0.529316	0.177669	2.979224	0.0039

Source: Author`s Processed Results

Thus the equation model can be arranged as follows:

$$Y_2 = -0.002770X_3 + 0.5005005X_4 + 0.529316Y_1$$

Table 5 shows that variable of tourism object integration and tourism expenses has positive and significant influence to visitor utility. And the role of government has negative and not significant influence to visitor utility.

It can be seen from the equation above that there is no effect of tourism promotion on visitor utilities. Thus, the promotion of attractions does not provide a satisfactory impact for visitors. However, the integration of tourist objects can increase the utility of visitors to these attractions. with product prices so high, but the cost of travel can affect the level of visitor utility.

From these two equations it can be concluded that there is a reciprocal relationship between tourism costs with the level of visitor utility. This is evidenced by the facts in the field, although the price of tourism products is quite high, but visitors can still satisfy themselves in enjoying these attractions.

Previous studies already explain how tourism became main sector for some countries to drive economic growth, and how the government effort to make the tourism give the contribution for regional income. Some infrastructure developed in order to make tourism satisfying and enjoy the tourism objects. Like people nowadays, infrastructure became the main reason for some of them, such as hotels, restaurant, tourism sign, electricity, road, bus, and etc.

The results of this study indicate that the cost of tourism and visitor utilities have a significant reciprocal relationship. Economic activity and utility of visitors have a significant effect on the tourism expense, as well as the tourism object integration and tourism expense have a significant effect on the utility of visitors. Increased economic activity can improve the economic conditions in the tourist area, with an increase in the number of visitors will encourage the economy. This research recommends the Padang City Tourism Office to increase the role of the government related to and quality of tourism products through training activities and tourist assistance in the city of Padang.

Acknowledgment

A thank you to the Rector of Universitas Negeri Padang for providing support to this research in the form of Penerimaan Negara Bukan Pajak (PNBP) funding and the Research and Community Service Institute (LP2M) and teamwork in this research.

References

[1] A. Liu and D. Chenguang, “Annals of Tourism Research Tourism productivity and economic growth,” *Ann. Tour. Res.*, vol. 76, no. April, pp. 253–265, 2019, doi: 10.1016/j.annals.2019.04.005.

[2] M. Schiefelbusch, A. Jain, T. Schäfer, and D. Müller, “Transport and tourism : roadmap to integrated planning developing and assessing integrated travel chains,” vol. 15, no. September 2000, pp. 94–103, 2007, doi: 10.1016/j.jtrangeo.2006.12.009.
[3] K. Kampar, M. Ikhsan, and P. Mardiana, “No Title,” pp. 689–700.
[4] Annas and Muhamad, “Analisa Input Output Sektor Pariwisata Di Kabupaten Banyuwangi,” vol. 4, no. 2, pp. 130–150, 2018.

8

Responsibility Hotels and Airlines During Natural Disasters in The Tourist Destination Area

T. Keizerina Devi Azwar[1a], Jelly Leviza[2]

[1,2] Faculty of Law, Universitas Sumatera Utara, Medan, Indonesia

a) Corresponding author: deviazwar@yahoo.com

Abstract

Indonesia is well known as a beautiful country with many attractive tourists destination. However, it also prone to different types of disasters. Geographical, meteorological, and geological conditions make the country has many kinds of natural hazards. The country is geologically part of the Pacific Ring of Fire and marked by many active volcanoes, earthquakes, and tsunamis. In the meteorological case, the country experiences flood and landslide during the wet season and drought in the dry season. Furthermore, during a dry season, forest fire also occurs in some provinces. In several locations of the country, tourist destinations are adjacent to the hazard zone. Previous research shows that Indonesia already has several laws that can protect tourists during a natural disaster. However, many reports show tourists neglect and disappointment during a natural disaster. Two of the essential agent in tourist industries are hotels and Airlines. Both suffer during a natural disaster, and both show a high number of complaints by the tourist. This paper aims to investigate the aspect of how Indonesian law covers tourist interest during natural disasters, especially from hotels and airlines. First, what are tourists' interests, hotels, and airlines during the occurrence of natural disasters? Second, this paper explored the responsibilities of hotel companies and airlines in the aftermath.

Keywords—Tourist, Airlines, Hotels, responsibility, disaster area.

1. Introduction

Tourism is very vulnerable to disasters, and if not managed properly, it will affect the tourism ecosystem and industrial performance [1]. Indonesia is very aware of this situation, realizing that based on the Directorate of Volcanology and Geological Disaster Mitigation (DVMBG) Ministry of Energy and Mineral Resources of the Republic of Indonesia data, 28 areas in Indonesia were declared prone to earthquakes and tsunamis [2].

On the other hand, the National Agency for Disaster Relief (BNPB), had release data that Indonesia has been dominated by floods, tornadoes, landslides, forest and land fires, drought, volcanic eruptions, earthquakes, and tsunamis, as well as tidal waves and abrasion [3]. However, if ordered by the impact on tourism, the most significant losses are caused by volcanic eruptions, earthquakes, and tsunamis, as stated in Table 1:

Table 1. Disaster in Indonesia and Impact on Tourism

Year	Place	Type	Loss (Trilion Rp)	Decline of Tourism
2010	Jogjakarta (Mt.Merapi)	Eruption	4.23	50% (2010)
2017	Bali (Mt. Agung)	Eruption	11	15,99% permonth
2018	Lombok	Earthquake	1,4	69,8%
2018	Sunda Strait	Tsunami	1	10%

Five Disaster in Indonesia and their impact on Tourism, News Desk, The Jakarta Post [4].

The high number of natural disasters is a challenge for Indonesian tourism, especially in order to maintain its performance. Indonesia has been experiencing an increasing number of foreign tourist arrivals in 2018, reaching 15.81 million people [5]. Based on data from the Ministry of Tourism of the Republic of Indonesia, Indonesia earned US $ 12.23 billion from the tourism sector in 2015. The number continues to grow, and by 2019, the government projected that Indonesia's income from tourism would increase by the US $ 20 billion and becomes the largest to beat the export of oil and gas and oil. To achieve this target, the government is targeting 20 million foreign tourists visit in 2019 [6].

In line with the situation above, this paper will discuss legal protection in Indonesia for tourist rights in the event of a disaster, and how the responsibilities of the aviation and hotels to tourists in the event of a disaster.

2. Research Method

This paper is based on normative legal research methods using secondary data as the main data source.

3. Discussion

3.1 Regulation and Tourist Protection

Law was created as an instrument to regulate the rights and obligations of legal subjects so that each legal subject can carry out their obligations properly and obtain their rights appropriately. According to Sudikno, law functions as the protection of human interests. For human interests to be protected, laws must be implemented. Law enforcement can take place normally, peacefully, but can also occur due to violation of the law [7].

One of the legal product that can relate to the regulation of legal protection for tourists is Law No. 10 of 2009 concerning Tourism.

In the event of a disaster, tourists have the same rights as the local community, such as the right for information, protection of health, protection of life and property, right to be evacuated. However, related to their trip, tourists also have the right to cancel trips, hotels, and planes.

Law No. 10 of 2009 concerning Tourism mentions tourist rights in Article 20. It is stated that every tourist has the right to obtain: accurate information about tourist attractions, tourism services in accordance with standards, legal protection and security, health services, protection of personal rights, and insurance protection for high-risk tourism activities. Tourist rights are also related to tourism entrepreneurs, namely people or groups of people who carry out tourism activities.

Law No. 10 of 2009 sets a burden on tourism entrepreneurs, one of which is to provide comfort, friendliness, security protection, and tourists' safety and provide insurance protection for tourism businesses with high-risk activities. What is meant by "tourism businesses with high-risk activities" according to the explanation in Article 26 letter e of the Tourism Act covers, among others diving tourism, rafting, rock climbing, jet coaster games, and visiting particular tourist objects, such as seeing wildlife in wild nature. Any tourism businessman who does not meet these requirements may be subjected to administrative sanctions.

Safety, protection of tourists, and respect for their dignity are the rights of tourists. These rights are affirmed in principle VII of The Hague:

1. That the measures to facilities tourist travel, visits and stays be accompanied by measures to ensure the safety, security and protection of tourists and tourist facilities and the dignity of tourists.
2. That an affective policy concerning the safety, security and protection of tourists and tourist’s facilities and respect for the dignity of tourists be established for this purpose.

Furthermore, The Global Code states that governments are obliged to protect tourists and their property, given the vulnerability of violence, crime, or other dangerous actions towards tourists. Therefore, the government needs to provide facilities information, security, insurance, and assistance as a needed traveler. The government needs to condemn and punish the perpetrator's crime following national law in every attack, abuse, abduction, or threats to tourists, to workers in the tourism industry, including the destruction of facilities tourism or cultural heritage, and nature [8].

Being aware of disasters can have a significant impact on the economy, social welfare, and a country's politics, the government has an essential role in disaster management even though disaster management is the responsibility of all elements of society. However, the disaster that occurred was not yet wholly surmountable. Some problems arise from countermeasures disasters, including disasters that are difficult to predict, equipment used to secure and evacuating disaster victims is still limited and minimal, coordination between the central government and regional government in disaster management not optimal and optimal, disaster management still use partial paradigms, the government has not carried out its functions with good at protecting victims of disasters. Law No. 10 of 2009 also burden the Government and Regional Governments to provide tourism information, legal protection, and security and safety to tourists. With the above settings, there is no specific protection of tourist rights. Legal protection in this law is more focused on tourist attractions [9].

3.2 Airlines and Hotels Responsibilities

To overcome the problem of disaster management, there are Law No. 24 of 2007 concerning Disaster Management, then followed up with implementing regulations, between Other Government Regulations Number 21 Year 2008 concerning the Implementation of Disaster Management, Government Regulation No. 22 of 2008 concerning Funding and Management Disaster Relief, Regulations Government No. 23 of 2008 concerning Roles And International Institutions and Foreign Non-Government Institutions in Disaster Management, and Presidential Regulation No. 8 of 2008 concerning the National Agency for Management Disaster. Law No. 24 of 2007 on Disaster Management only mentions community rights which are more focused on the rights of local communities and not tourist rights when disasters occur. [10]

Under Article 4 of Law No.8 of 1999 concerning Consumer Protection, Tourists are consumers of service users in the tourism sector. So, tourist has rights:

a. The right to comfort, security and safety in consuming goods and / or services
b. The right to choose goods and / or services and to obtain goods and / or services in accordance with the exchange rate and conditions and guarantees promised.
c. The right to true, clear and honest information about the condition and guarantee of goods and / or services;
d. The right to be heard of opinions and complaints on goods and / or services used;
e. The right to obtain advocacy, protection and efforts to resolve consumer protection disputes appropriately;
f. The right to consumer education and guidance;
g. The right to be treated or served properly and honestly and not discriminatory;

h. The right to receive compensation, loss aids, and / or replacement, if the goods and/or services received do not comply with the agreement or are not as intended.
i. The rights regulated in the provisions of other laws and regulations.

As stated above, one of the rights of consumers, including consumers of service users in the field of tourism, which in this case is referred to as tourists, i.e., has the right to comfort, security, and internal safety consume goods and services. Even according to the provisions of Article 4 letter a, for tourists as consumers who suffer losses deeds of tourism businesses, the parties concerned have the right to get compensation, compensation, and compensation, if the service received is not following the agreement or not as it should be [11].

Under the law, floods, earthquakes and other natural disasters are seen as force majeure that is an event or circumstances that occur outside the control of the stakeholders, which can also be called an emergency. Force majeure usually refers to acts of nature (acts of God), such as natural disasters (floods, earthquakes), epidemics, riots, declarations of war, wars. In the Indonesian Civil Code, force majeure is regulated in Article 1244 and Article 1245, in the section on compensation due to force majeure being the reason for being released from the obligation, including the obligation to pay compensation. The world of tourism also views natural disasters as a state of force majeure.

In terms of airline companies, the Government of Indonesia has issued Minister of Transportation Regulation No. PM 185 of 2015 Concerning Passenger Services for Economy Class Scheduled Domestic Commercial Air Transport. Where every scheduled commercial air transport business entity is required to return the air transportation service fee that has been paid by the prospective passenger, if the passenger cancels his flight.

Refunds are based on a percentage of the return of ticket costs that have been paid by potential passengers as follows:

Table 2. Airline Ticket Refund for Domestic Route

	Refund	
	Time Before Flight Schedule	% From Basic Fare
1	Before 72 hrs	75 %
2	72-48 hrs	50 %
3	48-24 hrs	40%
4	24-12 hrs	30 %
5	12-4 hrs	20 %
6	After 4 hrs	10%

Minister of Transportation Regulation No.PM 185 of 2015

In the case of force majeure conditions, passengers can get a full price refund of their airplane tickets after a reduction of administrative cost by:

Table 3. Airline Ticket Refund for Domestic Route in Case of Force Majeure

	Refund	
	Flight Type	Administrative Cost
1	Full Service	20%
2	Medium Service	15 %
3	No Frills	10%

Minister of Transportation Regulation No. PM 185 of 2015

Under the regulation, the refund period is mandatory no later than 15 working days from submission, for ticket purchases in cash, and 30 working days from submission, for purchasing tickets by credit or debit card. For rescheduling, passengers need to pay attention to the policies of each airline, and administrative fees may be charged for that.

There are no government policies regarding hotel cancellation or rescheduling. Nor was any obligation for hotels to accommodate tourists during natural disasters, especially when the stay time has ended. Everything depends on the hotel policy.

3.3 Insurance

Under Article 246 Commercial Code insurance or coverage is an agreement that binds the guarantor to the insured by receiving several premiums intended to guarantee the replacement of the insured due to losses incurred, damage, or loss of expected profits, it may occur due to an occurrence evenemen/fortuitous event (uncertain events)

Whereas in Act No. 2 of 1992 dated February 11, 1992, concerning Insurance Business, it is stated that Insurance or coverage is an agreement that occurs between two or more parties, in which the insurer binds himself to the insured party by receiving several insurance premiums to provide replacement services to the insured due to an expected loss, damage or loss of profit, or legal liability to third parties that the insured may suffer as a result of an uncertain event, or provide a payment made due to the death or life of an insured person.

Travel insurance has several benefits: First, it takes care of accidents while traveling (land, sea, and air). Usually, insurance will be paid for the risk of death, loss of limbs, or total paralysis. Insurance is also useful for emergency medicine, which is insurance that covers expensive medical expenses when we fall ill while traveling. Second, the cost of repatriation of remains, the death benefit for one family or relative who lives together, or travels together while being treated abroad. Third, insurance also offers assistance for medical evacuation facilities for 24 hours in an emergency worldwide. Travel insurance to protect loss and damage to baggage, both for items in the baggage and items that we use during the trip, as well as compensation for baggage delays of more than 12 hours. Fourth, insurance offers protection for travel delays or transportation delays of more than 12 hours, as well as accommodation and food and drink costs due to travel delays.

Insurance can be seen as a way out of protection for tourists in Indonesia; unfortunately, this has never been any mandatory obligation for tourists, hotels, or airline companies. Tourists visiting Indonesia, have no obligation to obtain travel insurance before entering. Especially with the existence of free visa and visa on arrival policies for many countries, the higher the number of tourists who come to Indonesia without insurance protection. Insurance is only required for tourism entrepreneurs who manage extreme tourism businesses.

4. Conclusion

Based on Law No. 10 of 2009 concerning Tourism, tourism companies are obliged to provide protection and security for tourists. In the event of a natural disaster, airlines are required to provide assistance, refunds, and rescheduling for passengers based on the Minister of Transportation Regulation No. PM 185 of 2015 Concerning Passenger Services for Economy Class Scheduled Domestic Commercial Air Transport. However, the hotel sector does not yet have clear arrangements regarding this matter, so it is passed away to hotel policy.

Based on Law No. 10 of 2009 concerning Tourism, tourism companies are obliged to provide protection and security for tourists. In the event of a natural disaster, airlines are required to provide assistance, refunds, and rescheduling for passengers based on the Minister of Transportation Regulation No. PM 185 of 2015 Concerning Passenger Services for Economy Class Scheduled Domestic Commercial Air Transport. However, the hotel sector does not yet have precise arrangements regarding this matter, so it is passed away to hotel policy. The regulations in force in Indonesia are seen as lacking in protecting tourist rights when natural disasters occur.

5. Recommendation

The importance of the tourism sector in Indonesia and the frequent occurrence of natural disasters in Indonesia should encourage the government to review various regulations that apply in the field of tourism and disaster management so that it focuses more on tourist rights.

References

[1] Wahyu Adityo Prodjo *(Edt).*, *5 Bencana di Indonesia yang Berdampak ke Sektor Wisata*, Kompas., https://travel.kompas.com/read/2019/01/16/220400327/5-bencana-di-indonesia-yang-berdampak-ke-sektor-wisata. 16 Januari 2019.
[2] Badan Pembinaan Hukum Nasional, *Posisi Indonesia dan kerentanan terhadap bencana.* http://tataruang.atr-bpn.go.id/Bulletin/upload/data_artikel/posisi%20indonesia.pdf
[3] Trend kejadian Bencana lima tahun terakhir (2014-2019) http://dibi.bnpb.go.id/., 18 Agustus 2019
[4] *Five Disaster in Indonesia and their impact on Tourism.*, News Desk, The Jakarta Post., https://www.thejakartapost.com/travel/2019/01/18/five-disasters-in-indonesia-and-their-impact-on-tourism.html., 18 Januari 2018.

[5] Irwan Syambudi, "BPS: Indonesia Dikunjungi 15,81 Juta Turis Sepanjang 2018", https://tirto.id/bps-indonesia-dikunjungi-1581-juta-turis-sepanjang-2018-dfGP ., 1 Februari 2019.
[6] Siaran Pers: Devisa Sektor Pariwisata Meningkat Mencapai 19,29 Miliar Dolar As, http://www.kemenpar.go.id/post/siaran-pers-devisa-sektor-pariwisata-meningkat-mencapai-1929-miliar-dolar-as., Senin, 19 Agustus 2019.
[7] Sudikno Mertokusumo, (1993), *Bab-bab tentang Penemuan Hukum*, Citra Aditya Bakti, Bandung
[8] I Putu Gelgel, (2009), *Industri Pariwisata Indonesia Dalam Global Perdagangan Jasa (GATS-WTO) Implikasi Hukum dan Antisipasinya*, PT. Refika, Aditama, Bandung
[9] Sarsiti and Muhammad Taufiq., *Penerapan Perlindungan Hukum Terhadap Wisatawan yang Mengalami Kerugian di Objek Wisata*., Jurnal Dinamika Hukum, Volume 12 No 1 Januari 2012
[10] Shanti Dwi Kartika., *Legal Politics of Natural Disaster Handlings*, Jurnal Kajian., Volume 20 No. 4 (2015).
[11] Anak Agung Gede Agung Dharmakusuma, SH., MH., *Pengaturan Perlindungan Hukum Dan Keamanan Terhadap Wisatawan*., Laporan Penelitian Mandiri., Fakultas Hukum Universitas Udayana, 2016.

9

Post-Earthquake Impact, Preparedness of Megathrust Earthquake, and Minangkabau Entrepreneurship

Donard Games[1a]

[1]Department of Management, Universitas Andalas, West Sumatra, Indonesia

[a)] Corresponding author: donardgames@eb.unand.ac.id

Abstract

Entrepreneurship plays a crucial role in fulfilling Indonesia's vision of becoming a well-developed country with an economy that focuses on high-growth business. As a land of Minangkabau, West Sumatra has been seen as a source of entrepreneurs in Indonesia. However, West Sumatra's earthquake in 2009 has awakened public awareness that West Sumatra's people live in a "ring of fire." In this case, Minangkabau entrepreneurs may have a more significant challenge as they deal with the 2009 earthquake impacts and the possibility of a future megathrust earthquake. Existing information sources at both academic and business levels reveal that knowledge remains scarce in Minangkabau entrepreneurship and natural disaster risks. This research attempts to explore Minangkabau entrepreneurs' responses in the post-disaster environment and looks at how far Minangkabau entrepreneurship could be developed regarding the constant threat of the megathrust earthquake. This research is presented based on a critical review of the literature about Minangkabau and disaster entrepreneurship. It is expected that some relevant constructs can portray Minangkabau entrepreneurship and disaster risk-related concepts such as preparedness, fear of failure, and resiliency.

Keywords: post-earthquake impact, preparedness of megathrust earthquake, fear of failure, Minangkabau entrepreneurship

1. Introduction

While tourism has become an essential aspect of economic development in West Sumatra, Indonesia, small and medium enterprises (SMEs) may not be able to benefit from that. The beauty of West Sumatra, including its unique culture, can attract travelers to come, and logically, SMEs will see this as business opportunities. The existence of SMEs, especially in the creative sector, will also contribute positively to West Sumatra's tourism. However, these SMEs may not be able to do so. First of all, SME owners in West Sumatra, a land of Minangkabau, may have dealt with their internal capacity to innovate. Secondly, they may also need to consider external environments. The present study focuses on two external environments that have signified West Sumatra: earthquake and potential of a megathrust earthquake. After West Sumatra's earthquake in 2009, there is an unprecedented collective understanding that West Sumatra is in a fire ring that has made it prone to earthquakes. This paper aims to provide a greater understanding of the link between earthquakes and Minangkabau entrepreneurship.

Minangkabau has been seen as a source of entrepreneurship in Indonesia [1]. However, there is a tendency that Minangkabau entrepreneurs have slowed down their entrepreneurial activities as they instead calculated risk-takers who prefer incrementalism in doing business [2]. Here post-earthquake impacts and preparedness of possible future megathrust earthquake may have effects on current Minangkabau entrepreneurship. As suggested by [3], extreme events may significantly change people. In this case, extreme events such as earthquakes may change the way Minangkabau SMEs do their businesses.

There is little research about how Minangkabau entrepreneurs are dealing with future constant fear; in this case, megathrust earthquake fear. Historically, Mentawai Island has the potential to have earthquakes as Danny Hilman, one of the earthquake researchers in Indonesia, publicly stated that between Siberut and Nias, there is a potential 9SR earthquake that can occur anytime. This will not only cause damages in Mentawai but also theoretically in coastal areas in West Sumatra. Our interviews with five Mentawai Island natives, they tend not to pay attention to this issue seriously. They are immune to this issue as they are frequently dealing with earthquakes. Our interviews in Padang mentioned the concept of *tawakkal* which means that they are submissive to God will include death and disaster, while they also seem to avoid some business risks and long term investment in their businesses. Again, we need to have a more comprehensive understanding of the impact of the earthquake on SMEs and how they prepared themselves for the potential of earthquakes in the future to anticipate fear of failure.

Fear of failure does not necessarily mean negative for entrepreneurship [4]. In some cases, fear of failure may help SMEs to be able to have clarity in business strategies. However, it is undeniable that the earthquake's preparedness may become the key issue in dealing with extreme events. After that, the present study also uses well-being that signifies successful Minangkabau entrepreneurship as business owners Minangkabau can deal with the fear of failure. It is expected that SMEs may see earthquakes as sources of fear of failure. They may also slow down their business investment. Religiosity may be an essential part of SMEs in dealing with earthquake impacts. Hence, SME resiliency perhaps is a way of responding to disasters in terms of entrepreneurship and business innovation. In brief, the present research will define Minangkabau entrepreneurship from the lens of the past earthquake (2009) and possible megathrust earthquake.

2. Literature Review

The present study uses the conceptualization from [5] and [6] studies that argued fear of failure and resilience have strong links with entrepreneurship. The present study also uses the concept of entrepreneurship context from [7] that has argued that it is important to include socio-cultural values that shape entrepreneurship in a particular context. Small business owners have not lived in isolation. Minangkabau is considered as a religious society in which Islam has been identified as a way of life [8]. That is why the present study includes religiosity in Minangkabau entrepreneurship.

2.1 Minangkabau Entrepreneurship

There are some characteristics of Minangkabau entrepreneurship. Islamic religiosity as a foundation of business activities, incrementalism in doing business, and power value type as the most influential personal value [2]. Additionally, [1] identified hard work, and [9] sees *merantau* (voluntary migration), which encourages a strong adaptation culture as characteristics that signify Minangkabau entrepreneurship.

2.2 Post-earthquake impact, preparedness of megathrust earthquake, and fear of failure

It is emphasized that the importance of disaster impact on business to understand the level of business experiences and damages [10]. This will also determine the way business owners perceive future events. In this case, it is argued that there is a strong link between disaster impact and preparedness of possible future disasters [11]. This can be shown from how business organizations, especially top management teams, consider and proactively communicate this issue within the organisation. The level of preparedness may determine fear of failure as the latter signifies the process of appraising threats in evaluative situations with the potential for failure [12].

2.3 Fear of failure, resiliency, and wellbeing

Fear of failure may reduce entrepreneurship [4]. This is because failure may cause negative impacts on entrepreneurs' wellbeing [13]. Well-being has been seen as one of the indicators that represent happiness and life satisfaction, and this is strongly related to the fact that Minangkabau entrepreneurs may be struggling in dealing with earthquakes and possible earthquakes in the future.

Additionally, resiliency may also play a more significant role in the link between fear of failure and wellbeing. Resiliency can be defined as the ability to bounce back or recover from stress [14]. In this case, stressful life because of earthquake issues can be reduced by SMEs' resiliency represented by their owners [15]. That is why resiliency may moderate the relationship between fear of failure and entrepreneurs' wellbeing.

2.4 Religiosity

As mentioned previously, religiosity may play a crucial role in shaping Minangkabau entrepreneurship. This is because, as suggested by [16] [17], Islam encourages entrepreneurship. Minangkabau entrepreneurship essentially is an example of a totally Muslim ethnic group that has identified Islam as a communal identity [8]). A study by Sari [18] confirms the importance of religiosity in Minangkabau people. Many scales have measured religiosity, most notably, by [19], but future studies may use a religiosity scale that represents mostly Islamic values, for example, by [20]. In terms of Islam and disaster response, [21] argued that Islam sees disasters as Allah's will, and Muslims need to fully submit themselves to Allah. This means that Muslims are suggested to do their best and to be optimistic even if they have many difficulties in this life. This is to confirm the importance of Islamic values that may be influential in the case of Minangkabau entrepreneurship. The present study uses the conceptualization from [5] and [6] studies that argued fear of failure and resilience have strong links with entrepreneurship. The present study also uses the concept of entrepreneurship context from [7] that has argued that it is important to include socio-cultural values that shape entrepreneurship in a particular context. Small business owners have not lived in isolation. Minangkabau is considered as a religious society in which Islam has been identified as a way of life [8]. That is why the present study includes religiosity in Minangkabau entrepreneurship.

3. Research Framework

Natural disasters such as earthquake disrupt and, in many cases, eliminate established businesses [5]. Furthermore, business owners may operate their business differently because of previous earthquakes and future possible megathrust earthquakes. The latter has given additional perspectives as a future extreme event that consistently influences entrepreneurs may change the entrepreneur's behavior, which affects their wellbeing.

Literature review shows that there are relationships between earthquake impact in the past, the preparedness of the megathrust earthquake, fear of failure, and entrepreneurs' wellbeing. As suggested by [4], fear of failure may discourage entrepreneurship activities. In this case, fear failure can be seen as an important indicator of whether earthquakes reduce entrepreneurship. The present study has four propositions that assist entrepreneurship researchers to encourage new questions about how natural disaster settings serve as catalysts for business performance. It is also possible that prone to disaster will lower the level of entrepreneurship.

P1. Earthquake impact will enhance preparedness of megathrust earthquake that reduce fear of failure in Minangkabau entrepreneurs.

P2. Fear of failure hinders entrepreneurial activities that decrease Minangkabau entrepreneur's wellbeing.

The present study also offers an idea that Minangkabau entrepreneurship, which is signified by religiosity, will affect how they see preparedness of future earthquakes and fear of failure. In addition, resiliency is seen as a continuity of religious values as Islam appreciates hard works, optimism, and, most importantly, submission to God [17].

P3. Religiosity moderates the link between earthquake impact and fear of failure, serving as a protector from the negative impacts of earthquakes.

P4. Resiliency moderates the link between fear of failure and Minangkabau entrepreneurs' wellbeing.

4. Conclusion

Entrepreneurship has been identified as a key point in enhancing Indonesia's economic development [17]. Minangkabau, as a source of entrepreneurs in Indonesia, can play a crucial role in this regard. However, Minangkabau entrepreneurship may be significantly affected by previous earthquakes and perhaps possible future earthquakes (i.e., megathrust earthquake). For this reason, the present study uses previous research mainly from [5] and [6]. The present study also emphasises the importance of the context of Minangkabau as a religious society. As suggested by [7], socio-cultural factors, including religion, provide some perspectives that enrich our understanding regarding entrepreneurship and society.

There is little research in examining the link between earthquake impact, the constant fear of future earthquakes, fear of failure, and entrepreneurs' wellbeing. Future research may also add some relevant factors. For example, firm age may also be considered as it is vital to evaluate SME performance as young firm SMEs may have a tendency to innovate better off compared to old firm age SMEs. By combining these constructs, based on propositions in this study, it is expected that there will be a greater understanding regarding disaster entrepreneurship in Minangkabau entrepreneurship.

References

[1] Elfindri., Ayunda, D., & Saputra, W. (2010). *Minang entrepreneurship*. Jakarta, Indonesia: Baduose Media.

[2] Games, D., Soutar, G., & Sneddon, J. (2013). Entrepreneurship, values, and Muslim values. *International Journal of Social Entrepreneurship and Innovation*, *42*, 361-373.

[3] Brück, T., Llussá, F., & Tavares, J. A. (2011). Entrepreneurship: The role of extreme events. *European Journal of Political Economy*, *27,* S78-S88.

[4] Cacciotti, G., Hayton, J. C., Mitchell, J. R., & Giazitzoglu, A. (2016). A reconceptualization of fear of failure in entrepreneurship. *Journal of Business Venturing*, *31*(3), 302-325.

[5] Monllor, J., & Murphy, P. J. (2017). Natural disasters, , entrepreneurship, and creation after destruction: A Conceptual Approach, *International Journal of Entrepreneurial Behavior & Research*, *23* (4), 618-637.
[6] Korber, S., & McNaughton, R.B. (2018). Resilience and entrepreneurship: A systematic literature review, *International Journal of Entrepreneurial Behavior & Research*, *24*(7), 1129-1154.
[7] Ramadani, V., Dana, L. P., Ratten, V., & Tahiri, S. (2015). The context of Islamic entrepreneurship and business: Concept, principles and perspectives. *International Journal of Business and Globalisation*, *15*(3), 244-261.
[8] Abdullah, T. (1966). Adat and Islam: An Examination of Conflict in Minangkabau. *Indonesia,* (2), 1-24.. doi:10.2307/3350753
[9] Mangundjaya, W. L. (2013). Is There Cultural Change In The National Cultures Of Indonesia? in Kashima Y, Kashima, ES & Beatson R (eds.) *Steering the cultural Dynamics,* The 2010 congress of The International Association for Cross-cultural Psychology: Melbourne, 59-68.
[10] Dahlhamer, J. M., & Tierney, K. J. (1998). Rebounding from disruptive events: business recovery following the Northridge earthquake. *Sociological Spectrum*, *18*(2), 121-141.
[11] Chikoto, G. L., Sadiq, A. A., & Fordyce, E. (2013). Disaster mitigation and preparedness: Comparison of nonprofit, public, and private organizations. *Nonprofit and Voluntary Sector Quarterly*, *42*(2), 391-410.
[12] Conroy, D. E., Willow, J. P., & Metzler, J. N. (2002). Multidimensional fear of failure measurement: The performance failure appraisal inventory. *Journal of Applied Sport Psychology*, *14*(2), 76-90.
[13] Shir, N., Nikolaev, B. N., & Wincent, J. (2019). Entrepreneurship and well-being: The role of psychological autonomy, competence, and relatedness. *Journal of Business Venturing*, *34*(5), 25-36.
[14] Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International Journal of Behavioral Medicine*, *15*(3), 194-200.
[15] Ryff, C. D. (2019). Entrepreneurship and eudaimonic well-being: Five venues for new science. *Journal of Business Venturing*, *34*(4), 646-663.
[16] Adas, E. B. (2006). The making of entrepreneurial Islam and the Islamic spirit of capitalism. *Journal for Cultural* Research, *10*(02), 113-137.
[17] Anggadwita, G., Ramadani, V., Alamanda, D. T., Ratten, V., & Hashani, M. (2017). Entrepreneurial intentions from an Islamic perspective: a study of Muslim entrepreneurs in Indonesia. *International Journal of Entrepreneurship and Small Business*, *31*(2), 165-179.
[18] Sari, D. (2013). Reinventing Religiousity in Minangkabau Society, in *Simposium Muafakat Minang*, 2013, UTM: Negeri Sembilan, Malaysia.
[19] Allport, G. W., & Ross, J. M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology, 5*(4), 432-433.
[20] El-Menouar, Y. (2014). The five dimensions of Muslim religiosity: Results of an empirical study. *Methods, Data, Analyses*, *8*(1), 53-78.
[21] Ramli, A., Mokhtar, M., & Aziz, B. A. (2014). Revisiting the concept of development, disaster and safety management: The Quranic perspective. *International Journal of Disaster Risk Reduction*, *9*, 26-37.

10

Analysis Recycling of Food Waste Restaurant in Padang City

Yommi Dewilda[1a], Rizki Aziz[2], Mhd. Fauzia[3]

[1,2 3]Department of Environmental Engineering, Faculty of Engineering, Andalas University, Campus Limau Manis Padang 25163, Indonesia

[a)] Corresponding author: yommidewilda@eng.unand.ac.id

Abstract

In recent years, food waste has become an issue of international concern to policymakers, practitioners, and researchers across various academic disciplines. Million of tons of restaurant food waste being disposed through landfill and illegal dumping each year. The restaurant industry is one of the important sectors to attract tourist arrivals in Padang city. However, some restaurants do not transport food waste to landfills in which will reduce the aesthetic value of the city of Padang as a tourist area visited by local and foreign tourists. The research aims to review the processing of restaurant food waste in Padang City based on generation value, composition, characteristics, and recycling potential. The generation of Restaurant waste in Padang City is 132 l/d or 15 kg/d for each restaurant. The composition of organic waste was 70.69 %, plastic waste was 11.35%, paper waste was 10.59%, and another waste was 7.37%. The potential for recycling restaurant food waste in Padang City consists of 7.65% paper, 51.32% plastic, 59.86% glass, 100% non-ferrous metal, and 91.71% organic waste. The average density of garbage was 0.143 kg / l; water content was 28.90%, volatile content was 68.93%, ash content was 1.34%, fixed carbon was 0.83%, C/N ratio was 24.62 and biodegradability fraction 61.86%. The treatment of restaurant food waste in the city of Padang was recycling and composting. Recycled waste was in the form of paper, metal, glass and plastic waste. Recyclable waste was collected and sold to the nearest Waste Bank or stalls. Composted waste was organic waste consisting of food waste, vegetables, fruit peels, and others. Composting was conducted by stacking the Takakura method. Food waste processing was conducted with the scale of the source. Waste that cannot be recycled or composted such as Styrofoam will be reduced.

Keywords: Composting, Food Waste Treatment, Padang city, Recycle, Tourism area

1. Introduction

Indonesian Law Number 18 of 2008 concerning Waste Management defines waste as the remainder of daily human activities and/or solid natural processes. The increase in the amount of waste produced and the growth that occurred in the region, both population growth and the growth of a waste generation, are influenced by food growth index, industry, and income per capita.

Waste is one of the common problems in Indonesia. The never-ending waste problem in most cities in Indonesia is caused by a management system that is not following Indonesia's regulations. There only 40% of the waste goes to landfill, and the rest is handled by waste producers such as burned (35%), landfilled (7.5%), composted (1.61%) and various efforts including recycling reset, disposed of anywhere, such as sewers, drainage or other water bodies [2]. Improper waste management will cause environmental problems, such as vectors of disease, air, water soil, and groundwater pollution. In addition to causing environmental problems, waste will also reduce the aesthetic value of a region due to the community's generation of waste.

Padang is a growing city indicated by the existing facilities and infrastructure built by the government. Simultaneously, the tourism sector is also increasingly growing. The development of tourism in this city has attracted both local and foreign tourists. One of the main attractions in tourism is culinary. The emergence of many restaurants marks this. The restaurant in its activities produces garbage. However, the waste is still not appropriately handled; where garbage is still piled up in the closest containers, this will reduce the aesthetic value of the city of Padang.

According to the Office of Tourism and Culture in Padang in 2017, there were 230 restaurants spread across Padang. This figure will potentially lead to the emergence of considerable waste from this sector, especially the potential for the emergence of food waste. Along with the increase in waste generation, various problems will arise, especially environmental pollution and aesthetic values that can harm the city of Padang as a tourism city.

According to the Food Agriculture Organization (FAO), food waste is garbage produced during the food manufacturing process and after eating activities related to sellers and consumers' behavior. The food waste problem has become a global concern in improving environmental sustainability [4]. Countries in Asia, such as Japan, have made efforts to own and manage food waste types since the new law was enacted in 2000 [8], while in Indonesia, especially the city of Padang, processing and managing food waste is still integrated with municipal waste.

Indonesian Law Number 18 of 2008 concerning Waste Management article 2 states that waste from restaurants is classified as household waste. As referred to in Article 12 of the Law, everyone in the management of household waste and household-like waste must reduce and handle waste in an environmentally sound manner. According to Regional Regulation Number 21 of 2012 concerning Waste Management in the City of Padang, the community is obliged to participate in waste management.

A study in Bandung, which involved 35 sample points, the food waste generation was 0.33 kg capt/d or 1.09 l/capt/d with the largest composition being an organic waste in the form of visitor food scraps, leaves, leftover fruit skin food by 73%, followed by plastic waste, tissue / paper and others at 12%, 11% and 4% [6]. Laboratory analysis for food waste in Bandung found water content of 68.32% and C / N levels of 33.69%. The right processing for food waste in the city of Bandung is composting.

Another study found that the generation of restaurant waste in the city of Padang was 0.213 kg / m 2/ h, with the largest composition being food waste, plastic, and paper [3]. Recycling potential for paper waste is 74.67%, 44.67% wet waste, 92.65% plastic waste, 99.35% glass waste and 98.39% metal. Laboratory analysis found 52.74% water content, 46.11% volatile content, 0.90% ash content and 0.25% fixed carbon and C/N ratio for restaurants in Padang City at 21.58.

West Sumatra, especially the city of Padang, is famous for its culinary delights. The types of food sold in restaurants in the city of Padang are meat-based and have culinary-based fish and seafood. Each restaurant processes food from different raw materials; this will result in different generations, compositions, and characteristics of waste in each restaurant type. Therefore, this research aims to examine what is the right processing for food waste produced from each restaurant based on the value of the ingredients, composition, characteristics, and potential of recycling food waste produced by restaurants in the city of Padang in previous studies, thus each restaurant can process food waste they produce to reduces the waste that goes into the landfill.

2. Research Method

Data collection consists of primary data and secondary data. The primary data needed in this study is a questionnaire consisting of several questions that form the basis of this study. In addition to primary data, the data needed in this study are secondary data consisting of generation data, composition, characteristics, and potential for recycling restaurant food waste in Padang's city obtained from previous research.

In this study, the initial study of the feasibility of processing restaurant food waste in the city of Padang was limited to recycling, composting, and anaerobic digestion, which refers to the characteristics of physical, chemical, and biological waste of restaurant food in the city of Padang. The selection of the application of restaurant food waste management in the city of Padang based on the advantages and disadvantages of each type of processing.

3. Results and Discussion

Surveys were carried out by distributing questionnaires to and then filled in by 23 restaurant owners or its representatives. The descriptive profile shows that the number of restaurants that reduce waste is only 13.04% or as many as 3 respondents. The restaurant made a reduction of the plastic spoon by replacing it with an aluminum one. Of the 23 respondents, 82.61% or as many as 19 respondents understood what food waste was. Restaurants in Padang city generally have not done anything about the food waste produced, but from the questionnaire results, there were 8.70% or 2 respondents who had sorted out the appropriate trash for sale in the stalls in Padang City such as paper, plastic, and metal. Each respondent almost answered that waste management could be done by composting, which is 91.30%. Only 8.70% or 2 respondents did not know how to process food waste produced. Respondents who answered needed 95.65% or 23 respondents. The respondents reasoned that waste is better processed at the source, because it can produce compost and is useful for respondents. Of the 23 questionnaires, 82.61% or 19 respondents agreed to the food waste processing activities produced. Because the waste produced will have the potential to be composted and recycled, and the processing of waste will produce benefits.

3.1 Composition of Restaurant Food Waste in the City of Padang

The composition of restaurant food waste in the city of Padang can be seen in Figure 1.

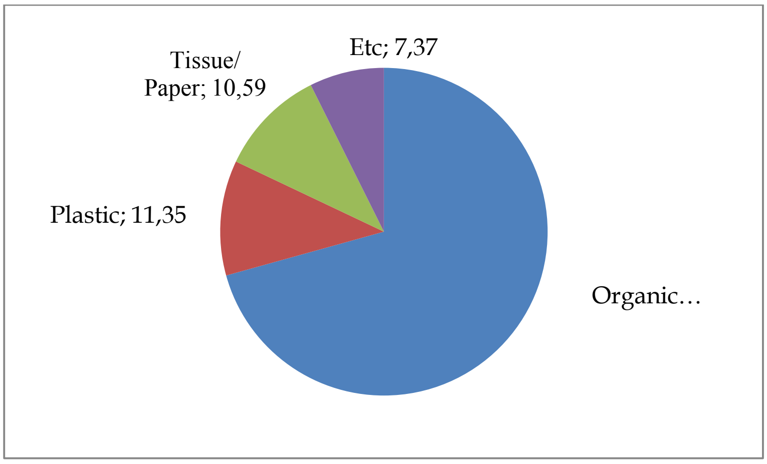

Figure 1. Composition of Restaurant Food Waste in the City of Padang

The study results on the composition of restaurant food waste in the City of Padang showed that the highest composition was an organic waste with a percentage of 70.69%, while the percentage of plastic waste was 11.35%. The composition of organic waste that dominates restaurant food waste in the city of Padang is the waste food leftover from visitors, garbage from food ingredients and vegetable waste.

3.2 Potential Recycling of Restaurant Food Waste in the City of Padang

The potential of restaurant food waste recycling in Padang City for organic waste is 91.71%, paper waste is 7.65%, plastic waste is 51.32%, glass waste is 59.86%, and metal waste is 100%. Paper waste has the smallest potential for recycling because the paper waste produced is often found in used tissue waste and food packaging that cannot be recycled.

3.3 Characteristics of Restaurant Food Waste in the City of Padang

The density of restaurant food waste in Padang City can be seen in Table 2.

Table 2. The Specific Gravity of Restaurant Waste in the City of Padang

Restaurant	Specific Gravity (kg/liter)
Restaurant	0,209
Café	0,119
Fast Food	0,069
Food Court	0,174
Average	0,143

Water content, volatility, ash and fixed carbon restaurant food waste in the city of Padang can be seen in Table 3.

Table 3. Water Content of Restaurant Food Waste in Padang City

Chemist Characteristic	Restoran				Average
	Restaurant	Cafe	Fast Food	Food Court	
Water Content (%)	37,23	29,78	23,25	25,33	28,90
Volatile Content (%)	60,69	68,13	74,21	72,69	68,93
Ash Content (%)	1,11	1,26	1,69	1,30	1,34
Fixed Carbon Content (%)	0,97	0,84	0,86	0,68	0,83

Analysis of the C / N ratio is carried out on restaurant organic waste in Padang City. Data from the calculation of the ratio of C/N waste to restaurant food in the city of Padang can be seen in Table 4.

Table 4. Ratio of C/N Restaurant Food Waste in Padang City

Sample	C (%)	N (%)	Ratio of C/N
Restaurant	16,70	0,72	23,32
Café	13,98	0,67	20,88
Fast Food	12,27	0,41	29,77
Food Court	12,91	0,53	24,50
Average	13,96	0,58	24,62

The results of measuring the biodegradability of restaurant food waste in the city of Padang can be seen in Table 5.

Table 5. Biodegradability of Restaurant Food Waste in the City of Padang

Sample	Lignin Content (%)	Biodegradability Fraction (%)
Restaurant	5,30	68,16
Café	6,68	64,29
Fast Food	10,58	53,37
Food Court	7,64	61,61
Average	7,75	61,86

3.4 Study of Restaurant Food Waste Management in Padang City

In this study, the initial study of the feasibility of processing restaurant food waste in the city of Padang was limited to recycling, composting and anaerobic digestion which refers to the characteristics of physical, chemical and biological waste of restaurant food in the city of Padang.

The waste component, which has a high value to be reused, based on the existing conditions, and the study is paper, plastic, metal, and glass waste [5]. It is estimated that the waste component that can be recycled in the future will range from four types of waste, namely paper, plastic, metal and glass. At the same time, materials that can be recycled by scavengers are plastic (PE, PS, PP, HDPE, LDPE, and PVC), paper (color, duplex, office files, newspapers, and HVS), metal (aluminum, copper, brass, zinc, iron, and drums, as well as glass (drink bottles, soy sauce bottles, medicinal bottles) and rubber [2]. While the waste that is considered not recycled by scavengers includes food scraps, platinum snack packaging, stone batteries and lights, which are not recycled, will be composted or disposed of in the landfill, according to this study, the restaurants produce paper, plastic, aluminum and bottles that can be recycled, each of which sells paper, plastic, aluminum, and garbage. The bottle produced into the stalls so that the waste to be disposed of to the landfill is less.

Each generation in the source is sorted according to the composition that can be recycled, and for the waste to be cleaned first. Waste is stored in a container and sold to stalls every once a week. Non-recyclable waste such as Styrofoam and paper containers restaurant owners will be recommended to reduce their use, while the rest of the cigarettes will be discharged to the landfill.

The tip of handling waste from the waste management system is a Final Processing Site (TPA) [2]. Until now, TPA in Padang's city is still implementing an open dumping system, where waste is stacked on the ground and does not pay attention to sanitation aspects. Thus, causing various environmental pollution such as pollution of groundwater and surface water and the proliferation of disease vectors. The magnitude of the negative impact arising from waste that is not managed properly needs attention and try to solve it. One of the efforts to handle the waste problem is using restaurant food waste as raw material for composting.

There is no composting activity in each source. Respondents mentioned that composting is very good to reduce costs and labor to dispose of waste and provide economic value for producers. However, due to limited knowledge of waste producers in composting, each source's composting does not work

Based on this study's results, the characteristics made as composting design criteria are limited to water content, C / N ratio, and biodegradability of waste. According to SNI 19-7030-2004, the water content for waste to be composted is a maximum of 50% compared with the moisture content of restaurant food waste in the city of Padang (28.90%). So, restaurant food waste in Padang City fulfills composting requirements.

Composting can be carried out well if the waste for composting has a C/N ratio between the values of 20-30 [9]. At lower ratios, ammonia will be produced and biological activity inhibited, while a higher C/N ratio, nitrogen will be a limiting variable [2. From the study results, it was found that the ratio of C / N restaurant food waste in the city of Padang was equal to 24, thus fulfilling the requirements of the composting process.

The value of the biodegradability fraction of waste can be stated as large if it exceeds 50% [11]. it can be said that restaurant food waste in Padang City has a considerable biodegradability value of 61.86%. This means that restaurant *biodegradable* organic waste in the city of Padang has the ability to decompose into compost. From the results of comparisons between composting control parameters and the characteristics of food waste the results of the study show that composting is suitable as an alternative to processing restaurant food waste in the city of Padang. For more details, see Table 6

Table 6. Composting Control Parameters and Characteristics of Research Results

Parameter	Design Criteria	Research	Information
Water Content	Max 50%	28,90%	Occupied
Ratio of C/N	20-30	24	Occupied
Biodegradability	>50%	61,86%	Occupied

The selection of suitable composting methods can be seen from the advantages and disadvantages of each type of composting. The advantages and disadvantages of the types of composting can be seen in Table 7.

Table 7. Advantages and Alternatives to Composting

Methode	Pros	Cons
StackingTakakura	1. Saving field; 2. Faster composting process; 3. More structured process; 4. Easier oprational.	1. Complex monitoring, beacuse each takakura box need to be monitored.
Rotary Kiln	1. Faster composting processt; 2. More structured process; 3. Need less worker; 4. Monitoring process not too complex.	1. Higher investation cost; 2. Need more space for the tools.

A suitable method for composting restaurant food waste in the city of Padang is Takakura stacking. This method's choice is based on consideration of costs, land availability, operational complexity, and potential occurrence of operational problems. Composting is conducted by storing organic waste into a hollow basket. The use of hollow baskets (fruit baskets) is intended for aeration (air circulation) purposes. Baskets (can be made of plastic or bamboo), whatever the most important basket model is, the basket is hollow. Composting was carried out with composting containers measuring 60 cm long, 43 cm wide and 30 cm high as many as 4 piles, where one pile consisted of 5 Takakura baskets arranged.

Dimensional Biodigester BD 1000 L (1.2 mx 1 m) can be modular (horizontally) (up to tens of units/meter) and vertical (4 levels/height 4.64 m), can also function as a guardrail (area commercial, garden, animal husbandry, agriculture, tourist area, housing). The price of this portable biodigester is Rp. 14,950,000.00. Each biodigester unit is capable of processing, 25 kg/day, and multiples; various sources of biological power (organic waste, garden/yard waste, aquatic weeds, livestock manure, food industry waste) are converted into biomethane (refined biogas), water and probiotic mud.

According to the study of waste management in the previous sub-section, it was found that recycling, composting, and anaerobic digestion are processing that can be applied to treat restaurant food waste in Padang City. Both processing for organic waste can be applied with a concept known as integrated waste management. Integrated waste management is defined as selecting and applying appropriate techniques, technology, and management to achieve targets in waste management [2].

Integrated waste handling aims to minimize or reduce the trash that is transported towards final damage. Waste that cannot be recycled, especially wet waste, is composted. The final step of the remaining ingredients that cannot be recycled and composted is discharged into Cold Water Landfill.

Comparison between recycling, composting and *anaerobic digestion* in terms of technology, cost, technical and scale of land can be seen in Table 8

Table 8. Comparison of Recycling, Composting and *Anaerobic Digestion*

Parameter	Alternative Processing	
	Composting	Anaerobic Digester
Technology	Stacking Takakura method	Portable biodegester 1000 L
Cost	Cheap	Expensive
Technic	Simple	Tools from Factory
Scale	Source	Source

It is recommended that restaurant waste in the city of Padang be composted by stacking Takakura method because in addition to the low cost, composting is done in a simple way.

Source management is an individual handling activity carried out by waste producers in the area where the waste producer is located. For the individual scale (source), this application begins with community empowerment to be invited to play an active role in separating waste from sources. This waste separation business is carried out to facilitate and streamline further waste management. Waste separation is carried out by classifying waste according to its type, distinguished from recycled waste (paper, plastic, metal and glass), waste to be composted (organic waste), and the remaining waste that is then transported to the landfill.

Efforts to utilize waste are carried out by reusing waste according to its functions and the use of beverage bottles or another packaging. Composting of waste at the source can be done using individual composter in the form of stacking Takakura composter. The selection of source scale processing is due to the amount of waste produced by each restaurant enough to do self-processing. If using a regional scale by making 3R polling stations impossible, because given the vastness of the city of Padang, it will be constrained in carrying out garbage collection from each restaurant and the costs incurred in paying retribution. Retribution fees that must be provided include investment, maintenance and operational costs. So, processing restaurant food waste in the city of Padang was carried out at a source with a simple composting method using the stacking Takakura method.

Acknowledgment

Appreciation is addressed to the Faculty of Engineering Universitas Andalas for financial support of this publication.

References

[1] Badan Standar Nasional. (2004). *SNI 19-7030-2004 tentangSpesifikasiKomposdariSampahOrganikDomestik*

[2] Damanhuri, E. dan Padmi, T. (2016). *Pengelolaan Sampah Terpadu*. Bandung: Teknik Lingkungan Institut Teknologi Bandung (ITB)

[3] Fadhil, M. (2012). Studi Timbulan, Komposisi, Karakteristik dan Potensi Daur Ulang Sampah Komersil Kota Padang. Padang: Jurusan Teknik Lingkungan

[4] Finn, S M. (2011). A Public-Private Initiative to Reduce Food Waste: A Framework for Local Communities. *Graduate Studies Journal of Organizational Dynamics*. Vol. 1 (1)

[5] Hafizh, M. (2016). Timbulan, Komposisi, Karakteristik dan Potensi Daur Ulang Sampah Domestik Kota Padang: Universitas Andalas: Teknik Lingkungan

[6] Mezardiana, A M dan Rahardyan, B. (2013). Studi Awal Timbulan, Komposisi dan Karakteristik Food Waste. Bandung: ITB

[7] Peraturan Daerah Kota Padang. (2012). *Pengelolaan Sampah*. Kota Padang

[8] Tanaka, M. (2008). Basic Characteristic of Food Waste and Food Ash on Steam Gasification. *Industrial & Engineering Chemistry Research*. Vol. 47. Issues 7. Page 2.414-2.419

[9] Tchnobanoglous, G, Theisen, H, Vigil, S.(1993). *Integrated Solid Waste Management*. New York: Mc Graw Hill Inc

[10] Undang-Undang Republik Indonesia Nomor 18 Tahun 2008 Tentang Pengelolaan Sampah

[11] Ruslinda, Y and Hayati, R (2013), Analisis karakteristik biologi sampah Kota Padang, TeknikA, Vol. 20, No.1. Pagel 33-39

11

The Muslim Traveller's Destination Choice

Dessy Kurnia Sari[1a], Khairul Warisin[2], Donard Games[3]

[1,2,3]Department of Management, Universitas Andalas, Padang, Indonesia

[a)] Corresponding author: dessyks@eb.unand.ac.id

Abstract

The main objective of this research is to investigate motivations of Muslim travellers to choose Padang as a tourist destination. While the online platform has been considered as important factors for today's travellers, Muslims may have a different characteristic in the way they making decision. There is a very limited study explain factors that are consider important for Muslim travellers. In this study, the effect of social media promotion and electronic word of mouth (e-wom) on Muslims travellers' decision making process is evaluated. Sample of the research are people who have experienced to visit Padang, West Sumatera, Indonesia. There was an equal number of male and female participated in this study, giving the total of N=120 respondents. This research used a multiple regression technique. The results indicated that social media promotion and electronic word of mouth (e-wom) have a significant effect on Muslim Travellers Decision to visit Padang, Indonesia. In addition, this research also found that most respondents read the other travellers reviews, observe pictures and stories on social media before making their own choices related to a travel destination. The results were discussed further for developing a sustainable tourism strategy in West Sumatera Indonesia, especially in targeting Muslim travellers.

Keywords: Social Media Promotion, E-WOM, Muslim Travellers, Tourist Destination, Indonesia

1. Introduction

Social Media has now becoming a source of information for travellers. People who decide to visit one place feel comfortable once they know the situation of a destination that would be visited. Travellers love to seek information especially from those that they know [1]. This issue is even more crucial for the case of Muslim travellers. Muslims have to follow some strict rules related to their religious teaching such as type of food to be consumed, condition of room to stay that would enabled them to pray, and situation of area where they stay that make them feel safe [2].

Indonesia has claimed to be a destination for Muslim travellers. Supporting by its majority of Muslim population, Padang, Lombok and Aceh are three cities in Indonesia that were trusted to be a host for Muslim travellers [3]. Padang, for example, offers Muslim travellers its new branding of 'halal tourist destination' city. The city has its own social media page strengthening this positioning for Muslim travellers while the travellers share stories to other. The stories may include attaching pictures, as part of travellers' experience of halal foods, Muslims supported facilities in the destination, as well as travellers review on their overall experience. Objective of this research is to investigate reasons of Muslim travellers to choose Padang as a tourist destination especially related to the effect of social media promotion and electronic word of mouth (e-wom).

2. Literature Review

2.1 Social Media Promotion

Promotion is activities to communicate the benefits of a product and persuade consumers to buy those products. Promotion is also designed to convey information about a product from a seller to potential buyers to influence attitudes and behaviour of those potential buyers [4]. In doing promotion, seller will inform about benefits of their products to attract potential buyers. In tourism industry, the promotional strategy is also crucial in helping travellers to make decision to visit a specific destination [5]. It includes informing travellers about what they would see in a tourist destination.

Nowadays, people are more connected to their social media. People love to share everything with others [1]. In social media, there is a concept of user generated contents (ugc) which means each user has possibilities to share information with another user. Promotional strategy will be beneficial if it is able to meet travellers' needs. Different travellers segment will be interested in to different type of promotions.

Social media promotion can be used in tourism sector for promoting their objects to travellers. Studies found that people see social media as a place, a tool, a service, to be able to express their feelings and to be able to meet and share experiences with others (similar) consumers through the internet [6]. For business context, social media is a tool to share information about a product to be sold. Social media contains conversations, promotions, and building opinions related to a tourist destination [7].

According to Ref no [8] promotion is an effort undertaken by a company to influence actual and potential consumers.With an advance technology, people are no longer sharing information through newspapers, magazines, radio and home telephones. Nowadays people prefer to do promotions through computers and cellphones connected to the internet [6]. It might reduce the cost of promotion. As stated by ref [8] with reduced communication costs, more companies decide to move from mass communication to more targeted communication.

Social media is a place, a tool, a service, for consumers to be able to express themselves and to be able to meet and share experiences with other consumers through the internet [6]. For business owners, social media can also be a tool to share information about a product. Social media is also related to conversation that affect peoples' opinion about a brand [9].

2.2 Electronic Word of Mouth

Study found that people love to share story with other people through digital channel [10]. In a communal society like Indonesia, people want to be a part of some social activities or just simply want to share story one another about products that they want to buy or not to buy [11]. People love to seek information online because this is much easier compared to physically present in the process of sharing information. The availability of strong internet access and mobile communication make Indonesian people have a new way in sharing their stories [12]. Mostly in e-wom, people who share information are not part of a company, they are purely consumers. However, the e-wom activities affect a company performance in the eyes of consumer. Studies claim that e-wom has a significant influence on travellers' decision about which places to be visited. People are even ready to change their travel plan after they read a meaningful review or stories from other travellers [13].

In enjoying their leisure activities, travellers love to take picture and post their activities on social media. Social media activities including sharing pictures, stories and even judgement about overall experience related to a tourist destination [14]. This type of information sharing found to be very useful for other travellers who are planning to find a place to visit. People will tend to listen more to those who have experienced a similar situation with them. For example, business people seek information from other travellers in business trips, millennial listen to other millennial, Muslims listen to other Muslims and so on.

2.3 Muslim Travellers' Destination Choice

Muslims travel decisions are quite complex. They consider many aspects before make a decision. In deciding their trips, Muslim travellers share the same value with other Muslim travellers[15]. There is some criterion that found to be important for Muslim travellers as part of their way of living. Muslims only do activities that are in line with their religious teaching.

Culinary, foods and beverage are important issues to be considered for Muslim travellers [15]. Muslims only consume Halal foods and are really concern about all aspect surrounding foods [2]. For example, foods that were produced by non-Muslims may not be considered as trustworthy as the ones that were produced by Muslim people although both have a Halal logo. Muslim people see the concept of halalan toyyibbaa as for the food that they consume which means the ingredient are acceptable based on Islamic laws and the food also good for human's body [2].

2.4 The Effects of Social Media on a Decision to Visit

Promotion through social media is very effective to do, because now social media users are mushrooming. Social media is also about how this conversation can be generated, promoted, and made income [9]. In a study conducted by [16], it appears that social media promotion significantly influences someone's decision to visit a tourist destination. Based on that, the present study proposes that:

H1: Social Media Promotion has a significant effect on a decision to visit

2.5 The Effects of E-Wom on a Decision to Visit

Social Media provides various facilities for marketers, especially in interacting with customers, conveying information to customers, helping to understand customers better, building and maintaining relationships with customers, facilitating the exchange of ideas, products, and services to meet the needs and desires of the community or market [17]. In a study conducted by [18], e-wom has a significant influence on a travel decision making. Based on that, the present research proposes that:

H2: Electronic word of mouth (e-wom) has a significant effect on a decision to visit.

Figure .1 shows a research model for this research in which social media promotion and e-wom are the independent variables that might explain a decision to visit (independent variable). There are two hypotheses for this study as mentioned earlier that can also be seen in the model.

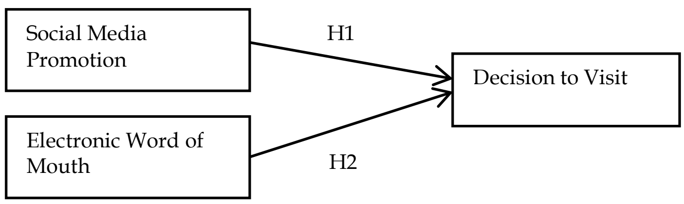

Figure 1. Research Model

3. Research Method

This research uses a quantitative method by distributing questionnaires. The data was gathered from 120 Muslim Travellers. Criteria for respondents in this study were Muslim tourists who had visited Padang whose aged are above 16 years old because they were considered as adults who make their own decision to travel and had knowledge in filling out the self-administrated questionnaires. This study uses some indicators that have been previously tested in other studies.

Social Media Promotion and decision to visit use a study of [16]. While for Electronic Word of Mouth (E-WOM) use a study by [19]. Example of indicators for measuring social media promotions are as follows: respondents use social media to find out a tourist destination, use social media during a trip to find a place, use hastaq (#) to see activities carried out by other tourists, use social media to look for culinary places in a tourist destination, use social media to find inspiration about place to visit, and see other people's experiences on their social media pages.

E-wom is another variable used in this study. Indicators of e-wom include: activities to read other people's online travel reviews about a tourist destination, see other travellers online reviews before traveling, worry if not reading a review before travelling, feeling confident after reading online reviews. Further, decision to visit was measured by [16] using the following indicators : decision to visit because of looking at the photos of travellers in social media, willingness to try new tourist attraction, jealousy about what the others posted on the social media, made decision because of what the other people do on social media. The researcher uses a five point Likert scale to calculate the results of the questionnaires. Then, the result was analysed by using a multiple linear regression in a SPSS 16 program.

4. Results and Discussion

4.1 Respondents Characteristics

There is an equal numbers of male (50%) and female (50%) participated in this study giving the total of 120 respondents. Majority of respondents are those whose ages are between 21-25 years old (51%), followed by 16-20 years old (26%). The traveller's reasons of travelling are mostly for holiday, enjoying views, and foods in the tourist destination. All of respondents are Muslim and domestic tourists.

4.2 Reasons to Choose Padang as a Tourist Destination

Travellers are often use social media as their main source of information. This study found that 92 percent of the total 120 respondents agree that they got influence from other people reviews on social media. 85 percents of respondents are also claimed that seeing other people photos also affect their decision. Further, more than a half of total respondents (65%) admit that they want to visit a place because they want to post something on social media related to their travelling activities. Thus, travellers admit that at least there are three important aspects that influence their decision to do a travel, such as:

1. Influenced by other people reviews about a tourist destination (92% of respondents say Yes to this)
2. Triggered by other people photos on their trips (85% of respondents answer Yes)
3. Intention to also share pictures on social media (65% of respondents say Yes)

4.3 Hypothesis Testing

This research aimed to evaluate the effects of social media promotion and e-wom on Muslim travellers' decision to visit Padang. As can be seen in Table 1, Hypothesis 1 and 2 are both supported. It means that both social media promotion and electronic word of mouth have effects on traveller's decision to visit Padang as a tourist destination. E-Wom shows a slightly higher effect than social media promotion. The significant levels are at $p<0.001$.

Table 1. Hypotheses Testing Results

	Hypothesis	*t-test*	*Result*
H1	Social Media Promotion has a significant effect on a decision to visit	5.73>1.96	Supported (β=0.39; sign at $p<0.001$)
H2	Electronic word of mouth (e-wom) has a significant effect on a decision to visit	3.76>1.96	Supported (β=0.56; sign at $p<0.001$)

Figure.2 shows that research model could explain 54 percent of the variance in the decision to visit. It also means that both social media promotion and electronic word of mouth might explain some reasons behind the respondents' decision to visit Padang as their travel destinations.

*

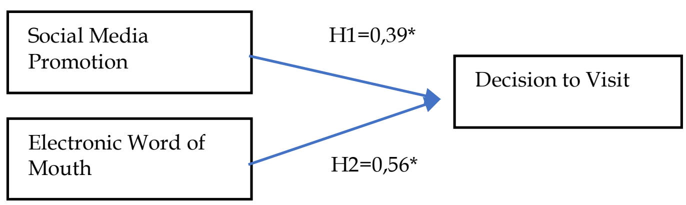

Figure 3. Research Model ieth Results

Significant at $p<0.001$*, R2-=0.54

4.4 Discussion

Social Media Promotion found to have a significant effect on Muslim travellers decision to visit Padang. This finding is in line with studies of [15] and [16].

Furthermore, [4] also found that travellers got a significant effect from social media promotion in their decision-making process to choose a travel destination.

This study also found that electronic word of mouth such as story, experience, and pictures of other travellers on social media, is significantly affect Muslim travellers' decision to choose Padang as a place to visit. This finding is in line with a study by [4] and [6] that also claim e-wom have an influence on travellers' decision to visit one place as their travel destination.

5. Conclusion

This research evaluates the effect of promotion on social media and electronic word of mouth on Muslim travellers' decision to visit Padang by distributing 120 questionnaires in Padang. Based on the finding, there are some interesting points to be highlighted, such as:

a. The promotion on social media has a significant effect on tourist decisions to visit Padang. This proves that there is an influence of promotion on social media conducted by the Padang government and tourism agency. Sharing good story and promoting Padang in social media has made people decided to come to Padang.
b. The finding also indicates that electronic word of mouth has a significant effect on tourist visiting decisions to come to Padang. This proves that there is an influence of electronic word of mouth on social media on travellers' decisions to visit Padang.

There are some implications of this research, firstly Padang local government need to manage carefully the promotional activities on social media since travellers rely on this media to make decision to come to Padang. Secondly, Padang government needs to closely monitor the positioning of Padang in travellers discussion and fix facilities that have a negative comment from travellers.

Result has indicated that respondents also use social media to eliminate destination that has been low rated by other travellers. Foods and facilities are two aspects that were considered important by Muslim travellers. Padang government needs to educate the restaurant in the surrounding area to meet a specific quality standard and meet the travellers' expectation.

References

[1]. Saito, C, S & Strehlau, V.L, (2017), Tourist Destination Choice: A Bibliometric study, *Review of International Business*, 13(1), 17-31
[2]. Lada, S., Tanakinjal, G. H., & Amin, H. (2009). Predicting intention to choose halal products using theory of reasoned action. International *Journal of Islamic and Middle Eastern Finance and Management*, 2(1), 66-76.
[3]. Tribunnews.com. (2016) Sumbar-aceh-ntb-borong-anugerah-wisata-halal-nasional. Available at https://www.tribunnews.com/wonderful-

indonesia/2016/09/23/sumbar-aceh-ntb-borong-anugerah-wisata-halal-nasional-2016. Accessed at 1st of Januari 2019

[4]. Xiang, Z., & Gretzel, U. (2010). Role of Social Media in Online Travel Information Search. *Tourism Management.* 31(2):179-188. *DOI: 10.1016/j.tourman.2009.02.016*

[5]. Thurau, H, Gwinner, K, P, Walsh, G, & Gremler, D, D, (2004). "Electronic Word of-Mouth via Consumer Opinion Platforms: What Motivates Consumer to Articulate Themselves on The Internet" *Journal of Interactive Marketing,* 18(1), 38-52

[6]. Litvin, S., Goldsmith, R., & Pan, B. (2008). Electronic word-of-mouth in hospitality and tourism management. *Tourism Management.* 29(3), 458-468

[7]. Kaplan, AM & Haenlein, M. (2010). Users of the world, unite! The challenges andopportunities of Social Media. *Business Horizons.* Vol 53(1): 59 –68

[8]. Kotler, P.R., Bowen, JT & Makens, J. (2014). Marketing for Hospitality and Tourism: Sixth Edition. London: Pearson Education Limited.

[9]. Safko, L and David K.B (2009). The Social Media Bible: Tactics, Tools, and Strategies for Business Success, John Wiley & Sons: New Jersey.

[10]. Cheung, C. M, & Thadani, D. R. (2010). The Effectiveness of Electronic Word of Mouth Communication: A Literature Analysis. 23rd Bled e Conference eTrust: Implications for the Individual, Enterprises and Society. Bled, Solvenia.

[11]. Sari, D.K, Liu, F & Mizerski, D, (2017), Boycotting Foreign Products: A Study of Indonesian Muslim Consumers. *Journal of Islamic Marketing*. 8(1). 16-35

[12]. Yang, B., Kim, Y., & Yoo, C. (2013). The integrated mobile advertising model: The effects of technology- and emotion-based evaluations. Journal of Business Research, 66(9), 1345–1352. https://doi.org/10.1016/j.jbusres.2012.02.035

[13]. Zhang, K. Z. K., Zhao, S. J., Cheung, C. M. K., & Lee, M. K. O. (2014). Examining the infl uence of online reviews on consumers' decision-making: A heuristic – systematic model. *Decision Support Systems*, 67, 78–89. https://doi.org/10.1016/j.dss.2014.08.005

[14]. Stanko, T. L., & Beckman, C. M. (2015). Watching You Watching Me : Boundary Control And Capturing Attention In The Context Of Ubiquitous Technology Use, *The Acadeny of Managenent Journal*, 58(3), 712–738.

[15]. Yusof, N, S & Ramli, K, I, (2019). International Muslim Travellers Expectation toward Islamic Hospitality Services in Malaysia, Simposium on Islamic Tourism. Kuala Terengganu (15-16 April 2019)

[16]. Parsons, H.L, (2017), Does Social Media Influence an Individual's Decision to Visit Tourist Destinations? Using a Case Study of Instagram. Dissertation. Cardiff metropolitan University.

[17]. Wang, W, Chen, R.R, Ou, C, X, & Ren, S.J, (2019), Media or message, which is the king in social commerce?: An empirical study of participants' intention to repost marketing messages on social media, *Computers in Human Behaviours*, 93, 176-191

[18]. Janet.H.M, Francisco, M.L & Juan, S.F, (2013): The influence of e-word-of-mouth on travel decision-making: consumer profiles, *Current Issues in Tourism,* DOI:10.1080/13683500.2013.802764

[19]. Jalilvand, M.R. & Samiei, N. (2012), The Effect of Electronic Word of Mouth on Brand Image and Purchase Intention, *Marketing Intelligence & Planning*, 30 (4)

12

Tourism Solid Waste Management System: An Investigation to Support Sustainable Tourism in Bukittinggi

Rizki Aziz[1a], Karina Muharani Jefri[2]

[1,2]Department of Environmental Engineering, Faculty of Engineering, Universitas Andalas, Padang, Indonesia

[a)] Corresponding author: rizkiaziz@ft.unand.ac.id

Abstract

A model of tourism solid waste management has developed for the most visited tourism destination in Bukittinggi City, namely Taman Marga Satwa and Budaya Kinantan (TMSBK) and Taman Panorama dan Lobang Jepang (TPLJ). The model developed based on previous research on the solid waste characteristic of the tourism area of TMSBK and TPLJ and the guideline of the Ministry of Public Works of the Republic of Indonesia. This study aims to analyze the existing practices of the solid waste management system. Moreover, develop a model of tourism solid waste management system that accommodates the mandate of the national solid waste management constitution by applying the reduce-reuse-recycle (3R) approach. The model serves all coverage areas and applies waste separation from the waste sources, waste collection, waste treatment on the waste treatment station (TPS3R) by composting method and recycling, and transport the residue into the landfill. Applying the model found that the need of the infrastructures and equipment are; the individual and communal waste storage with three sorting types consisted of compostable waste, recyclable, and other wastes, with a volume of 60 L of each. Waste collection applies an indirect communal scheme into a TPS3R located in TMSBK using motorized tricycles and waste cart with 1.5 m3 and 1 m3 capacity, respectively. The area of the TPS3R is 240 m2, with a loading capacity of 10 m3 per day. Treatment that applied is composting with the Takakura method, while recyclable material sale into souvenirs and handicrafts. Residual waste is transferred into a container with 8 m^3 volume and disposed into the Regional Landfill in Payakumbuh by using an arm roll truck.

Keywords: Solid waste management, tourism area, sustainable tourism, Taman Marga Satwa dan Budaya Kinantan (TMSBK), Taman Panorama dan Lobang Jepang (TPLJ)

1. Introduction

Indonesian Government through Regulation No. 50 of 2011 places Bukittinggi as one of the National Tourism Destination which has the primary function of tourism and has potency for development. Two primary tourism objects in Bukittinggi are Taman Marga Satwa dan Budaya Kinantan (TMSBK), Taman Panoramadan Lobang Jepang (TPLJ) [1]. TMBSK has an area of 7 Ha and TPLJ is 3,5 Ha, some attractions in TMSBK are Taman Marga Satwa dan Budaya Kinantan, Rumah Adat Nan Baanjuang Museum, Jembatan Limpapeh, and Benteng Fort de Kock, while attractions in TPLJ are Taman Panorama Ngarai Sianok and Lobang Jepang [2]. TMSBK located in Kelurahan Benteng Pasar Atas while TPLJ in Kelurahan Bukit Cangang Kayu Ramang [3], both are in Kecamatan Guguk Panjang. TMSBK and TPLJ are the tourism area with the most number of visitors in Bukittinggi. Tourists visiting TMSBK in 2016 were 652,310 people and increased in 2017 to 700,657 people, while tourists visiting TPLJ in 2015 were 308,761 people and increased in 2016 to 333,474 people [2].

Studies of solid waste management in the tourism area has become an interesting lately. Some countries have published the studies such as Kashmir [4], Cyprus [5], Spain [6], Vietnam [7], Romania and Italy [8], and also Indonesia [9,10,11], the related study located in Bukittinggi about solid waste generation, composition, and recycling potential, of tourist areas in Bukittinggi City. The study shows that the total solid waste generation in TMSBK and TPLJ in 2018 was 6.587 m^3/day, and the generation unit is 2.098 L/person/day, individually. Solid waste generation in TMSBK was 5.171 m^3/day with a generation unit is 2.412 L/person/day, and solid waste generation in TPLJ is 1,416 m^3/day with generation unit is 1,421 L/person/day. The study also revealed that the highest composition of the waste in TMSBK was yard waste by 28.28%, and in TPLJ was food waste by 28.46%. Furthermore, yard wastes and metal wastes in TMSBK and TPLJ can be recycled [12]. Data on solid waste generation, composition, recycling potential, and characteristics of a city and area are useful for planning waste management systems, such as determination of storage, collection, transportation, the design of processing facilities and landfill [13].

TMSBK and TPLJ are in the coverage area of the municipal waste management system. Tourism, Youth, and Sport Agency of Bukittinggi is responsible for keeping and maintaining cleanliness in tourism objects [14]. Waste management practices in TMSBK and TPLJ still apply the old method, namely the collect-transport-dispose system. While, according to Indonesian Constitution No. 18 of 2008 about solid waste management, the waste source should apply the sustainable solid waste management system that consists of waste reduction and handling. [15] Therefore, the existing solid waste management system should be improved through system planning into a sustainable solid waste management system refer to the manual that issued by the Public Work Ministry [16], it is in-line with the development of sustainable tourism.

This study aims to identify the problem of the existing practice of solid waste management in TMSBK and TPLJ; to promote the development needs; to recommend the sustainable waste management scenario, and to design the facilities' needs for five year periods. By this plan, the management system focus on waste reduction, sorting, utilization, and processing approach at the TPS3R inside the tourism area, therefore the waste that transported into the final disposal will be fewer. Also, the management of tourism waste can educate tourists to have environmental awareness on waste reduce-reuse-recycling activities. This plan is expected to overcome the tourism waste problem in Bukittinggi City by practicing the relevant technical and nontechnical aspects.

2. Literature Review

Solid waste management defines as a systematic, comprehensive, and sustainable activity that includes the reduction and handling of waste. The waste reduction includes activities of restriction on waste generation, waste recycling, and reuse of waste while waste handling activities include sorting, collection, transportation, processing, and final processing of waste. [15]. Moreover, according to the Ministry of Housing and Regional Infrastructures [17], municipal solid waste management is a system that consists of five sub-system components, namely regulation/law, institutional and organizational, operational techniques, financing, and community participation.

Based on the manual of implementation of infrastructure and facility for municipal solid waste management [16], some guidelines referred to by this study are as follows.

Sorting and storage. Sorting is the activity of grouping and separating waste according to type. At the same time, storage is an activity to collect temporary garbage in an individual or communal container in a source of waste by considering the types of waste.

The waste sorting does through waste grouping activities into at least five types of waste consisting of: waste that contains hazardous and toxic materials, biodegradable waste, reusable waste, recyclable waste, and other waste. Waste segregation is carried out by managers of tourism areas, and the managers in carrying out waste sorting are required to provide regional-scale sorting and composting facilities.

Requirements for sorting and sorting facilities are based on waste volume, type of waste, placement, collection schedule, and type of collection and transportation facilities. Sorting and compartment means must: labeled or marked, distinguished material, shape, and color of the container, and use a closed container. Storage classified into individual and communal. Individual storage can be a bin or other container that meets the requirements, while communal storage can be in the form of a temporary collection station (TPS).

Collection. The collection is the activity of taking and moving the waste from the source of waste to a temporary shelter or waste treatment station with the principle of 3R (TPS3R). The collection should not be remixed after sorting and storage. The waste collection includes patterns: direct individual, indirect individuals, direct communal, indirect communal, and sweeping the road. Collection of sorted waste does through arranging the collection schedule according to the type of disaggregated waste and source of waste, and provision of segregated waste collection facilities.

Waste collection carried out by managers of tourism areas. Managers of tourism areas for collecting waste must provide TPS, TPS3R, and a collection tool for waste sorting. Types of waste collection facilities can be in the form of a motorcycle, cart, and bicycle.

Treatment/processing. Processing is the activity of changing the characteristics, composition, and amount of waste. Waste treatment includes activities of compaction, composting, material recycling, and turning waste into an energy source. In waste processing, it must consider waste characteristics, environmentally friendly processing technology, work safety, and social conditions of the community. Waste processing technology can be in the form of physical, chemical, biological, thermal, and other processing technology. Physical treatment includes reducing the size of waste, compaction, magnetic separation, density, and optics. Chemical processing could be as affixing chemicals or other materials to facilitate further processing.

Meanwhile, biological treatment technology includes aerobic and anaerobic treatment, such as composting and bio gasification processes. Thermal treatment technology can be incineration, pyrolysis, and gasification. Moreover, for other technologies can be used to produce fuel, namely Refused Derived Fuel (RDF). The application of technology should prioritize the recovery of materials and energy from the process.

Waste treatment carried out by the manager of tourism areas. Managers of tourism areas must provide area for processing facilities in the form of TPS3R. The existence of TPS3R can be integrated with community-based waste management systems such as waste banks.

Transportation. Transportation is the activity of carrying waste from a source or temporary shelter to integrated waste treatment or final processing site using motorized vehicles designed to transport waste. Waste transportation from TPS and TPS 3R to landfills may not be remixed after sorting and storage.

Waste transportation is carried out with the following provisions: maximizing the capacity of the transport vehicle used; the shortest possible transport route and with the least obstacles possible; the frequency of transportation from TPS and TPS3R to landfills is carried out by the amount of available waste, and rites apply by considering the efficiency and effectiveness of transportation. Waste transportation operations must pay attention to transportation patterns, transportation facilities, and transport routes. The pattern of waste transportation consists of the transportation of waste with a collection system directly from the source to the landfill, and waste collection through the removal system at TPS and TPS 3R.

The means of transporting waste can be in the form of dump truck/tipper truck, arm roll truck, compactor truck, street sweeper vehicle, and the trailer. The choice of waste transportation facilities must consider the technical life of the equipment, road conditions in the operation area, mileage, waste characteristics, and carrying capacity of maintenance facilities. Routes for transporting waste must pay attention to traffic regulations, traffic conditions, workers, size and type of conveyance, waste generation transported, and transport patterns.

Transportation is carried out by the district/city government. District/city government in carrying out waste transportation by providing means of transporting the waste, including disaggregated waste that does not pollute the environment, and transport waste from TPS and TPS3R to landfills. In transporting the waste, the regency/city government can provide an intermediate transfer station.

3. Research Method

The study divided into several stages. First, the literature studies sourced from textbooks, journals, and previous research on the amount of generation, composition, and potential of waste recycling. The next stage is the secondary and primary data collection. Data in the form of a general description of the location, the number of tourist facilities, area, number of visitors and a map of the tourist area, while primary data is about the existing practice of waste management through interviews with staff of Tourism, Youth, and Sport Agency, and also with Environmental Affair Agency of Bukittinggi City government. The third step is to identify the problems and development needs by comparing the existing conditions of waste management with waste management system criteria that apply in Indonesia [16, 15, 14, 13]. The fourth stage is the determination of the waste management scenario, which consists of strategies based on the relevant aspects of technical and nontechnical. The last step is the planning of the infrastructure and facilities needs for waste management in tourism areas based on solid waste baseline data and the selection of an appropriate system for TMBSK and TPLJ tourism areas.

4. Results and Discussion

4.1 Existing Condition of Planning Area Management System

Layouts of TMSBK and TPLJ showed in Figures 1 and 2. The source of waste in the TMSBK and TPLJ comes from visitors, traders, maintenance, and facility waste around the tourist area. Based on observations, the waste composition is food waste, yard, wood, paper, and plastic. While the waste storage in bins provided by the Environmental Affairs Agency and Tourism, Youth, and Sport Agency of Bukittinggi City. Environmental Affairs Agency provides separate waste storage, namely for organic and inorganic waste, but in practice, they still mixed. The waste storage provided by Tourism, Youth, and Sport Agency is in the form of trash cans that have modified and varied. The waste collection system applies a communal system by using carts and motorized tricycles. There are no waste processing and reuse activities in TMSBK and TPLJ tourism area. In the TMSBK tourism area, waste transportation uses containers and vehicles as arm roll trucks with the hauled container system pattern.

Meanwhile, the waste from the TPLJ area collected and transported into the transfer station in Gulai Bancah using a dump truck with the stationary container system pattern. Furthermore, the waste is transported into the regional final disposal site in Payakumbuh City. Types of storage used in TMSBK and TPLJ showed in Table 1.

Table 1. Storage in TMSBK and TPLJ

Storage	Volume	Units	Age (years)	Condition
TMSBK				
Three-types bin	40 L	8	3	Not Good
Two-types bin	40 L	11	3	Not Good
Five-types bin	40 L	4	3	Not Good
Green bin	120 L	14	5	Not Good
Green bin	60 L	11	4	Not Good
TPLJ				
Two-types bin (blue)	25 L	3	3	Not Good
Gray bin	25 L	15	1	Good
Two-types bin (orange)	25 L	13	3	Not Good
Watermelon-shaped bin	25 L	7	2	Good
Five-types bin	25 L	2	3	Not Good

Source: [1]

Table 2. Collection Equipment in TMSBK and TPLJ

Equipment	Volume	Units	Age (years)	Condition
Waste cart	1 m^3	2	5	Not Good
Motorized tricycle	1,5 m^3	1	2	Good
Wheelbarrow	0,25 m^3	11	2	Good

Source: [1]

Table 3. Transportation Equipment in TMSBK and TPLJ

Equipment	Volume	Units	Age (years)	Condition
Container	8 m^3	1	4	Good
Armroll Truck	8 m^3	1	2	Good
Dump Truck	8 m^3	1	2	Good

Source: [1]

Lately, no regulation about tourism area waste yet. The institution responsible for tourism waste is Tourism, Youth, and Sport Agency, and Environmental Affairs Agency of Bukittinggi City at the waste collection and transportation stage. The financial support for managing waste in TMSBK and TPLJ comes from the City Revenue and Expenditure Budget of Bukittinggi. Visitors of TMSBK and TPLJ have been actively put their waste in the waste storage that has provided although not fully match with bin types.

The layout of TMSBK and TPLJ in Bukittinggi can be seen in Figures 1 and 2.

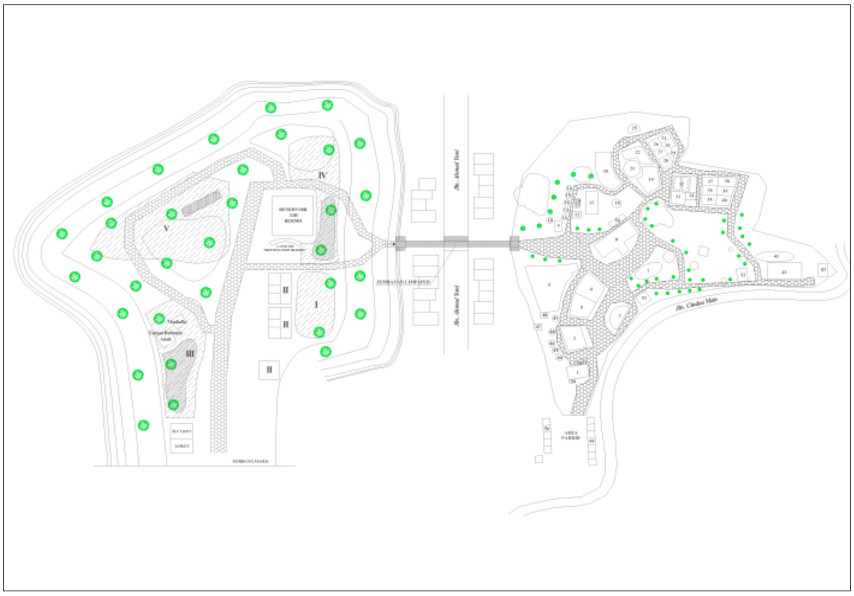

Figure 1. Layout of TMSBK

Figure 2. Layout of TPLJ

4.2 Problem Identification and Development Needs

Some existing problems of waste management system in TMSBK and TPLJ are:

- Using a city-level management scale instead of region-level.
- The waste sorting and storage system for organic waste and inorganic waste practices improperly.
- Waste collection equipment in TMSBK and TPLJ was not in the right conditions. Route and numbers of rites have not arranged.
- Waste processing does not exist yet.
- Waste transportation uses a truck with no separation.
- There is no regulation about waste management in the tourism area yet.
- Duties and responsibilities between government agencies were not clearly defined.
- The visitors and merchants have the awareness to dispose of the waste into the proper storage, although not in proper types of containers.

Improvement needs of solid waste management in TMBSK and TPLJ showed in Table 4.

Table 4. Improvement Needs in TMBSK and TPLJ

Items	**Improvement Needs**
Technical Aspect	
Service level	100%
Storage and sorting	three types of container (green for garbage, yellow for rubbish, and red for others) with 60L volume
Waste collection	Waste cart with 1 m^3 volume and motorized tricycles with 1,5 m^3 volume
Waste processing	Composting, plastic processing, and packing, wood recycling, together with paper, metals, and aluminum sell into the informal sector
Transportation	Arm roll truck
Non-Technical Aspect	
Institution	Tourism, Youth, and Sport Agency, and Environmental Affair Agency
Regulations	Regulations and guideline for waste management in the tourism area need to develop
Financial	City Revenue and Expenditure Budget of Bukittinggi, retribution from merchants, revenue from recycling product selling, and Corporate Social Responsibility (CSR) from companies
Social participation	Each waste storage needs to provide posters to educate visitors

4.3 Waste Management Scenario

Service level in waste management of TMSBK and TPLJ is planned by 100% for five years. The service area is in TMSBK and TPLJ with management level on a regional scale. Waste management scenario by sorting the waste based on the types of waste. Waste storage patterns divided into individual and communal storage. Individual storage could be as a plastic bag, plastic sack, and plastic bin. At the same time, communal containers are a set of 60L containers with three different colors, green for garbage, yellow for rubbish, and red for others. Communal containers distribute around the tourism area with 100 m distance between each other.

Waste collection applies indirect communal schemes. Waste collects by a waste cart with 1 m^3 capacity and a motorized tricycle with 1,5 m^3 capacity. Waste cart used to collect waste in TMSBK because of the TPS3R located inside the TMSBK area. Waste collection in the TPLJ has two phases; the first phase is inside the TPLJ area by using a waste cart with 1 m^3 capacity. Waste collected every day into the communal container with 1200 L capacity. The second phase is from the communal container in TPLJ into the TPS3R in TMSBK by using a motorized tricycle with 1,5 m^3 capacity.

Waste processing applies composting, processing, and packing of plastic. Composting uses the Takakura method with a 40L basket. Residual from TPS3R transported using Hauled Container System with 8 m^3 arm roll truck. Residual waste landfilled in Regional Final Disposal Site of Payakumbuh.

4.4 Follow Up Plan

Based on the calculations, the number of facilities needed in the next five years in TMSBK and TPLJ showed in Table 5-7.

Table 5. Needs of Storage of TMSBK and TPLJ

Storage	Volume	TMSBK	TPLJ	Total
Individual				
Shopping complex	-	36 units	36 units	72 units
Maintenance	40 L	42 packs	-	42 packs
Communal				
Roads, Crowd Centers, and Facilities	60 L	53 set	18 set	71 set
Communal Container 2	1.200 L	-	3 units	3 units
Residue Container in the TPS3R	8 m^3	-	-	1 unit

Table 6. Needs of Waste Collection Equipment in TMSBK

Collection Equipment	Units	Rites/day
Cart of garbage	1	3
Cart of rubbish	1	4
Cart of others	1	2

Table 7. Needs of Waste Collecting Equipment in TPLJ

Waste Composition	Collecting Equipment	Units	Rites/day
Garbage	Waste cart 1 m^3	1	1
Rubbish			1
Others			1
Garbage	Motorized tricycle 1,5 m^3	1	1
Rubbish			1
Others			1

Waste processing in the TPS3R applies Takakura composting method using a 40 L volume basket total of 70 units with a composting time of 14 days. The TPS3R is planned to have an area of 224 m^2 with eight employees.

Transportation of residues from the TPS3R uses Hauled Container System (HCS) transportation pattern into Regional Landfills in Payakumbuh. The vehicle uses an arm roll truck with a capacity of 8 m^3 with collection frequency is one time in two days, based on standard in the guideline [16].

5. Conclusion

Through this study, it is concluded that: the existing practices of solid waste management in the tourist area of TMBSK and TPLJ still not comply with the standard of Indonesian. Some problems related to technical and nontechnical aspects and need to be developed.

In order to implement the sustainable solid waste management system in the tourist area of TMBSK and TPLJ, several things have to carry out. For technical aspects, some scenarios need to implement. First, the pattern of storage used is the communal form of bin fiberglass with a volume of 60 liters consisting of three types of waste sorting. The green container uses for garbage, yellow for rubbish, and red for others. Second, waste collects every day, but in TPLJ, it collects once every six days. Third, the collection pattern uses an indirect communal pattern for the scale of the area with a collection tool. TMSBK uses a 1 m3 waste cart with three times rites, and TPLJ is using a 1,5 m3 motorized tricycles with three times the number of rites. Four, the transportation system uses an arm roll truck with 8 m3 capacity with once in two-day transportation to the Regional disposal site of Payakumbuh. Lastly, waste processing takes place in the recycle center by composting and recycling of waste.

Meanwhile, for the nontechnical aspect, some programs need to apply. Firstly, the institutional structure in the TPS3R consists of the chairman, secretary, treasurer, business manager, and several field coordinators, as well as the division of tasks of the waste management of TMSBK and TPLJ. Secondly, sources of funding come from the city revenue and expenditure budget of Bukittinggi, Corporate Social Responsibility (CSR) with companies that care about the environment, merchant fees, and the results of the sale of 3R products. Thirdly, provide regulations in the solid waste management system of TMSBK, and TPLJ refers to Bukittinggi Mayor Regulations. Furthermore, fourthly, visitors participate in the waste management system of TMSBK, and TPLJ Bukittinggi by disposing of wastes in the provided containers. At the same time, the merchants play a role by sorting out the waste that they produce, saving waste in the garbage bank, and paying the waste retribution.

For future study, this model of tourism solid waste management system can be evaluated for its environmentally friendly and sustainable system by using the Life Cycle Assessment method. Moreover, it will be interesting to apply this model to other potential tourism destinations in Bukittinggi as well as other locations in Sumatera Barat Province.

Acknowledgment

Thanks addressed to the Faculty of Engineering Universitas Andalas for financial support of this publication (Grant number 020/UN.16.09.D/PL/2019).

References

[1] Dinas Pariwisata, Pemuda dan Olahraga Kota Bukittinggi, “Annual Report”, 2017, Unpublished. (in Bahasa)
[2] Dinas Pariwisata, Pemuda dan Olahraga Kota Bukittinggi, “Annual Report”. 2018, Unpublished. (in Bahasa)
[3] Badan Pusat Statistik Kota Bukittinggi, “Bukittinggi in Number”, 2015. (in Bahasa)
[4] R.A. Bhat, R. Nazir, S. Ashraf, M. Ali., S.A. Bandh, and A.N. Kamili, “Municipal solid waste generation rates and its management at Yusmarg forest ecosystem, a tourist resort in Kashmir,” Waste Manage Res. vol.32, pp. 165– 169, 2014.
[5] A.A. Zorpas, I. Voukkali, and P. Loizia, “Desalination and Water Treatment The impact of tourist sector in the waste management plans, The impact of tourist sector in the waste management plans,” Desalin Water Treat., vol. 56, pp. 1141-1149, 2015.
[6] I. Arbulú, J. Lozano, J. Rey-Maquieira, “The challenges of municipal solid waste management systems provided by public-private partnerships in mature tourist destinations: The case of Mallorca,”” Waste Manage., vol.51, pp. 252-258, 2016.
[7] M.G. Hoang, T. Fujiwara, and S.T. Pham Phu, “Municipal Waste Generation and Composition In A Tourist City – Hoi An, Vietnam,” Journal of JSCE, vol. 5, 123-132, 2017.

[8] R. Giurea, I. Precazzini, M. Ragazzi, M.I. Achim, L.J. Cioca, F. Conti, V. Torretta, and E.C. Rada, “Good Practices and Actions for Sustainable Municipal Solid Waste Management in the Tourist Sector,” Resources, vol.7, pp. 1-12, 2018.
[9] M. Naltaru, R. Purmaini, and R. Irsan, “Solid waste management planning of tourism area of Bukit Kelam, Kabupaten Sintang,” Undergraduate Thesis. Universitas Tanjungpura: Pontianak, 2014. (in Bahasa)
[10] I.W. Wijaya, and Y. Trihadiningrum, “Solid waste handling strategies in tourism destination of old Buleleng port, Bali,” Undergraduate Thesis. Institut Teknologi Sepuluh Nopember: Surabaya, 2014. (in Bahasa)
[11] R. Aziz and Mira, “Study of recycling potential of solid waste of tourist area in Pariaman City,” IOP Conf. Ser.: Mater. Sci. Eng., vol. 602, pp. 012059, 2019.
[12] R. Aziz and K.M. Jefri, “Study of recycling potential of solid waste of tourism region of Taman Marga Satwa and Budaya Kinantan (TMSBK) and Taman Panorama dan Lobang Jepang (TPLJ) in Bukittinggi Cty,”. Proceeding of 5th ACE Conference. Padang, pp 82-90, 2018. (in Bahasa)
[13] Badan Standardisasi Nasional,” Technical operation of municipal solid waste management. Indonesia, publication number: SNI-19-2454-2002, 2002. (in Bahasa)
[14] Walikota Bukittinggi,” Regulation of Bukitting Major Number 18 year of 2015 concerning manual of solid waste management operation,” Bukittinggi, 2015. (in Bahasa)
[15] Republik Indonesia,“ Constitution number 18 year of 2008 concerning solid waste management,“ Jakarta, 2008 (in Bahasa)
[16] Kementerian Pekerjaan Umum, “Ministry regulation number 3/PRT/M year of 2013 concerning Implementation of solid waste infrastructures and facilities on household waste and alike handling,” Indonesia, 2013. (in Bahasa)
[17] Departemen Pemukiman dan Prasarana Wilayah Kementrian Pekerjaan Umum, “Guidelines for Managing Municipal Solid Waste Management,” Indonesia, 2003. (in Bahasa)

13

Sharia Supervisory Board (SSB) Function Supervision in The Application of Tabarru' Concept in Sharia Insurance in Indonesia

Wetria Fauzi[1a]

[1]Faculty of Law Andalas University, Padang, Indonesia

[a)] Corresponding author: wetriafauzi@law.unand.ac.id

Abstract

The fundamental concept of sharia insurance is mutual help among the participants of the sharia insurance and has no commercial purpose. Sharia insurance is a set of agreements between the sharia insurance company and policyholder and agreement amongst the policyholders, in the framework of managing contribution based on the sharia principle. Sharia insurance has a contract which known with the term of tabarru' which aiming goodness to help among fellow humans, not only for commercial aspect. The main problem in applying the tabarru concept in sharia insurance is in the aspect that tabarru' is applied 'comes from tabarru' origin 'where the lawgiver authorizes this concept. Should be resolved voluntarily with expecting no compensation. If the participant entitled to file a claim as the compensation of their contribution which they have paid, it will change the entire concept of takaful to bilateral contract (mu'awadhah) where money that paid for donation is changed to a claim. In this case, the notion of gharar and maysir, as in conventional insurance, not become the main concern. The surplus is the exclusive rights of the participant while other is applied that the participant has donated contribution as tabarru, in this case, tabaru' in sharia insurance lost its essence as mutual help. The problem in applying tabarru contract, the primary duty of Sharia Supervisory Board is to supervise sharia financial institution activities in order to comply with the sharia provisions and principles that have been stated by Sharia National Board (Dewan Syariah National/DSN). There is a need to improve government supervision function through Sharia Supervisory Board (Dewan Pengawas Syariah/DPS) and Financial Service Authority (Otoritas Jasa Keuangan) coordinating with each other.

Keywords: Tabarru' contract, Sharia Supervisory Board (SSB)

1. Introduction

The fundamental concept of sharia insurance [20] and conventional insurance is different. That concept needs to be studied first because if it does not understand well, then the fundamental concept of sharia insurance is considered equal with conventional insurance. Sharia National Board (SNB) define the meaning of sharia insurance (ta'min, takaful, or tadhamun) as the attempt of mutual protection and help among several participants through investment in the form of asset or tabarru' with given return pattern to face specific risk through a contract which following sharia provisions (fatwa DSN MUI No. 21/DSN-MUI/X/2001 on General Guidelines of Sharia Insurance). Based on Sharia National Board of Indonesian Ulama Council (SNB IUC) or in Bahasa Indonesia Known as DSN MUI can be interpreted that the fundamental concept of sharia insurance is the act of mutual help among the sharia insurance participants and not intended to any commercial purpose. Meanwhile, the basic concept of conventional insurance is trading between insurance participants and the company [25]. Sharia insurance is rapidly growing in Indonesia. The development of the sharia insurance industry cannot be separated from the high awareness of the majority of Indonesian society, which is Muslim to apply Islamic teachings. This factor is supported by the existence of the majority of Ulama opinion that classified conventional insurance as a forbidden deed because of usury, uncertainty, (gharar), and gambling or speculation (maisyir) involved [5].

Islamic law encyclopedia stated that insurance is a transaction of agreement between two parties, the first party is obligated to pay some money and the second party is obligated to receive the money if something happened then the problem is solved based on the agreement which agreed by both parties [4]. The definition of sharia insurance in muamalah is taking a risk together among fellow humans, so each person becomes the person in charge of the risk to the others, mutually holding the risk is conducted in the presence of mutual help, and good deeds by each contribute money as the act of taking the risk together [24].

Sharia National Board (DSN) stated that sharia insurance [21] (ta'min, takaful, or tadhamun) as the attempt of mutual protection and help among several participants through investment in the form of asset or tabarru' with given return pattern to face specific risk through a contract which following sharia provision [21]. Unitlink Sharia is sharia insurance protection [4] through mutual protection and help among several participants through investment in the form of asset. Unitlink is a combination of insurance and investment, giving return patterns to face specific risk through contract (engagement), which is following sharia provisions. Article 1 section 2 of law insurance mentioned that: Sharia insurance is a set of agreement, consist of agreement between the sharia insurance company and policyholder and agreement amongst the policyholders, in in the framework of managing contribution based on sharia principle in order to help and protect each other by doing:

a. Provide claim to the participant or policyholder because of loss, damage, incurred costs, beneficial loss, or legal responsibility to the third party which may be experienced by the participant or policyholder because of uncertain things, or

b. Provide payment based on the death of the participant or payment based on the participant life accumulated amount of benefit which has been set and/or based on fund management results.

The article above described that premium as the essential part of insurance agreement is not found in the sharia insurance concept but entitled as a contribution. The payment of the claim to the policyholder is based on the management of the fund. It means there are differences from the agreement elements between conventional insurance and sharia insurance. Sharia insurance runs based on the sharia principle. Article 1 section 3 of law insurance stated that sharia principle in Islamic law principle in insurance business based on a fatwa issued by the legal institution in the arrangement of fatwa in the sharia region. The concept of risk in sharia insurance itself is the sharing of risk, where each participant guarantees each other. In sharia insurance tabarru′ fund gathered in a pool of funds, where one of the insurance participants is experiencing misfortune and filing a claim, the claim will be taken from tabarru′ fund following the contract agreement. In sharia contract context, tabarru′ intend to give fund of virtue with expecting nothing in return with the purpose to help fellow insurance participants if one of them experiencing misfortune. Many on conventional insurance run sharia insurance unit, which implemented Islamic law principle, with tabarru′ contract.

Sharia insurance is formulated in tabarru′ contract. In article 1, section 3 of law insurance stated that sharia principle in Islamic law principle in insurance business based on a fatwa issued by the legal institution in the arrangement of fatwa in sharia region. Often found a gap between tabarru′ contract concept theory and the practice in sharia insurance unit, so Sharia insurance does not match the true sharia principle. Therefore, this writing discusses the concept of tabarru′ contract following sharia.

2. Review of Sharia Insurance

Sharia insurance business is an insurance business that receiving great attention nowadays. In its principle, the things that distinguish between sharia insurance and conventional is sharia insurance eliminates uncertainty element (gharar), speculation alias gambling (maisir), and money interest (riba) in business activities so that the insurance participant feel free from ruthlessness which harms them [6].

Sharia insurance has several terms in Arabic, among them, which (1) takaful, (2) ta′min, and (3) tadhamun [23] in Islamic law encyclopedia stated that the agreement transaction between two parties; the other party is obliged to fully guarantee to the payor if something happened to the first party based on the agreement [14]. Sharia's first legal definition arranged with the new insurance law in 2014.

In article 1 section 2 general clause chapter I of law insurance, stated that:

Sharia insurance is a set of agreement, which consist of agreement between sharia insurance company and policyholder and agreement amongst the policyholders, in the framework of managing contribution based on sharia principles in order to help and protect each other by doing:

a. Provide claim to the participant or policyholder because of loss, damage, incurred costs, beneficial loss, or legal responsibility to the third party which may be experienced by the participant or policyholder because of uncertain things, or
b. Provide payment based on the death of the participant or payment based on the participant life accumulated amount of benefit which has been set and/or based on fund management results.

The general insurance company based on sharia, and there is sharia Reassurance Company, which runs the business based on Islamic law principles as well as conventional insurance. Law regulates the sharia insurance business following the Islamic law concept. The payment of the claim to the policyholder is based on the management of the fund.

Based on section 8 and 9 article 1 of law insurance, sharia insurance can be categorized as:

General Sharia Insurance is a business of risk management based on sharia principle to mutually help and protect by providing claim to the participant or policyholder because of loss, damage, incurred costs, beneficial loss, or legal responsibility to the third party which may be experienced by the participant or policyholder because of uncertain things.

Sharia Life Insurance is a business of risk management based on sharia principle to mutually help and protect by providing claim based on the participant life or death, or claim to the rightful party in a specific time that regulated in the agreement, which the amount has been set and/or based on fund management results.

As regulated by the law of insurance above that sharia insurance business divided into general sharia insurance and sharia life insurance, this equal with conventional insurance as general knowledge divided into damage insurance and an amount of money insurance, damage insurance categorized as general insurance and an amount of money insurance categorized as life insurance. Sharia insurance is entitled with other term, takaful insurance.

Sharia insurance or takaful consist of two types:

a. Takaful *Keluarga* (life insurance), is a form of insurance which provide protection in encounter the takaful insurance participant death and personal accident. Involve: planned takaful, funding, education, hajj fund, teryn, personal accident. [17]

b. Tafakul *Umum* (damage insurance), is a form of insurance which provide financial protection in facing misfortune and damage on tafakul participant belonging, like house etc. involve: vehicle, fire damage, personal accident, ocean shipping, engineering, etc.[17]

Sharia National Board of Indonesian Ulama Council issuing a fatwa about sharia insurance general guidelines, defining sharia insurance meaning. Sharia insurance (ta'min, tafakul, tadhamun) is the act of mutual help among several participants or parties through investment in the form of tabarru' asset that gives refunds to face specific risk through contract or engagement following sharia principle [21].

The definition of conventional insurance has been explained in advance. In etymology called as insurance, in Dutch called verzekering, which born the term assurantie, assuradeur to the guarantor and ge assurader to the insured party [23].

Sharia insurance has a contract in it known as tabarru' that is purposed to virtue and mutual help among fellow humans, not only for commercial purposes and tijarah contract. Tijarah contract is a transaction with a commercial purpose, for the example mudharabah, wadhi'ah, wakalah, etc. in tabarru' contract, mutabarri manifest the attempt to help someone as recommended by Islamic teachings, the sincere donor will be rewarded with massive merit as listed in Al-Qur'an chapter 2 verse 26 [23]. Meanwhile, conventional insurance agreement is regulated in article 1774 of the Indonesian civil code, which categorized insurance or responsibility as a speculative agreement, which equated as gambling. The agreement concept in conventional insurance is regulated in article 1313 of the Indonesian civil code. Both parties, guarantor and insured doing contract that bring forth legal relationship bilateral rights and obligation as the consequent. The conventional insurance is criticized for containing gharar, maysir and riba which is prohibited in Islamic law. Therefore, as the alternative sharia insurance practice emerge in society. Sharia insurance initially only arranged in Sharia National Board decree. Moreover, regulated in article 40 of law insurance in 2014.

The source of sharia insurance is guided by Islamic law sources such as Quran, sunnah, ijma', fatwa of prophet Muhammad acquaintances, qiyass, dan fatwa DSN-MUI. Meanwhile, conventional insurance sources of law come from human thoughts, philosophy, and culture. In its business, sharia and conventional insurance is guided by positive law.

3. Tabarru' Contact Concept in Sharia Insurance

Tabarru' contract using Sharia National Board of Indonesian Ulama Council fatwa as its guidance (SNB-IUC) fatwa No.21//DSN-MUI/X/2001 about general guidelines of sharia insurance, stated Sharia insurance (*ta'min, tafakul, tadhamun)* is the act of mutual help among a number of participants or parties through investment in the form of *tabarru'* asset that give refunds to face certain risk through contract or engagement in accordance with sharia principle [2]

Insurance concept that regulated in Islamic law to manifest *ta'awun,* or *takaful* is insurance concept that in its practice there is *tabarru'* contracts. Generally, contract in sharia concept are:

a. *Tijarah* contract that implemented is *mudharabah* contract. In *tijarah* contract, sharia insurance company acts as *mudahrib* that manage the participant donation, meanwhile the participant acts as *shahibul maal.*
b. Used *Tabarru'* contract is a grant. In *tabarru'* contract sharia insurance participant gives a grant which is used to help other participants who is

experiencing misfortune, while the company acts as the manager of the grant. [22]

Tabarru' contract is a grant in the form of *tabarru'* donation to help the participants as regulated in the policy which not intended for any commercial purpose. *tabarru'* fund is the collection of *tabarru'* donation from the participants contribution, which the mechanism to use it based on the agreed *tabarru'* contract.[20] decree number 2 of the first chapter of Sharia National Board fatwa No. 53/DSN-MUI/III/2006 about *tabarru'* contract in sharia insurance and sharia reassurance stated that*tabarru'* contract in insurance is all the contract among the policyholders. Policy in the form of deed regarding the agreement between insurance participant and the insurance company. Contract decree number 1 of Sharia National Board fatwa about *tabarru'* contract on sharia insurance and reassurance stated that *tabarru'* contract on insurance is the contract in the form of grant for benefaction purpose and mutual help among the participant, not for commercial purpose.

Tabarru' derived from the word *tabarra‟a-yatabarra‟u- tabarru‟an,* which means donation, *hibah (grant),* virtue, and charity. The person who gives the donation is entitled *mutabarri'* (philanthropic). *Tabarru'* is voluntary giving of someone to others, with no compensation which cause transfer of ownership of the property from the giver to the person who was given [20] majority of Ulama define *tabarru'* as a contract that cause an ownership of a property, with no compensation, conducted by a living person to other person voluntarily.

No interest fund will be stored in *tabarru'* account by the company in a n exclusive account. Different with savings, claim fund is given through *tabarru'* account initially intended by all the sharia insurance participants for the needs to help the participant who is experiencing misfortune is given under these condition:

1. The death of participant
2. The agreement is expired

Every received *takaful* premium will be put in an exclusive account which intended as *tabarru'* and used to pay if a participant filed a claim for misfortune of himself or the property itself. *Takaful* premium will be put into the participant join account to be invested to fund projects with sharia principle. The investment profit goes to the joint account minus the insurance charge (claim, insurance premium). If there is remaining balance, it will be shared based on *mudharabah principles*. Participant's share profit will be given back to the participant who doesn't experience the misfortune based on the participation. Meanwhile the profit that received by the company will be used to fund company operational business [20]

4. Sharia Supervisory Board (DPS) Function Towards Tabarru' Contract Application

Nowadays, the practice not only to give mutual protection. It is advanced by the existence of investment and savings. The company separated the fund into two: participant risk fund and participant investment fund. The company position *takaful* in this context acts as an agent or investment manager of the participants. The underlying contract is *mudharabah* and *wakalah* contract.

Mudharabah is cooperation contract where first party provide fund, and the second party managing the fund. The profit will be shared based on the contract. The loss of the fund bears by the first party (*rabb maal)* meanwhile the second party (*mudharib)* bears the business and employee lost. On the account of insurance company, the fund provider is known as participant while the insurance company acts as the fund manager. In this contract, the manager will receive contribution from the participant. Contribution is considered as venture capital (*ra'sul maal)* which will be managed and invested in sharia. Contract determine that every profit from the business will be shared between *takaful* operator and participant. If there is underwriting surplus, then will be shared to the participants because it is not part of the profit. This *mudharabah* design enable the insurance company to only receive shared profit based on the agreed contract, and doesn't get the underwriting surplus. Underwriting surplus in this model should be fully distributed to the participants as part of the contract, not profit. But this circumstation not profit. But this circumstance is not likable no the insurance company (manager). Therefore, the company insurance set *mudharabah* model by modify where underwriting surplus considered as *"mudharabah profit"* to be shared between participant and *takaful* operator.

Wakalah is agent contract where the first party mandates the second party as his agent to conduct certain job. In this contract the participant known as *muwakkil* and agent (*wakil)* considered as the insurance company (manager). The participant appoint manager as agent to manage the related fund. As compensation, the insurance reserves the right to achieve the agreed number of amount. The manager will invest the money in sharia. Every profit or surplus will be fully distributed to the participant. In *tabarru' application* in sharia insurance there is no surplus sharing in *wakalah* model. Therefore, *takaful* company then modify *wakalah* concept. In this model, the *takaful* company reserves the right to receive the profit as work costs. *Tabarru'* is a noble concept in Islam, but it is still an unfinished debatable issue, the problem that emerge from the reality that the contribution that paid by the participant is not pure. On the contrary, the donation is conditional: every participant in *takaful* should pay certain amount of money in order to cover unpredicted damage in the future. The contribution is paid to get future compensation. The donation amount also determined by risk probability flat. The level of contribution adjusted with the participant "the higher the risk exposure goes; the amount of the contribution will be higher too". This condition cause sharia problem among Ulama because from the origin of the concept *tabarru'* should be paid voluntarily, not an obligatory.

From the explanation, above, it is found that the main problem in the application of *tabarru'* concept lays on the aspect that *tabarru'* is determined 'originated from *tabarru'* nature 'that this concept should authorized by lawgiver. Many notions that *tabarru'* should be completed voluntarily with expecting to compensation. If the participant rightful to file a claim as compensation from the money that he has paid as his contribution, this condition will entirely change the concept of *takaful* into bilateral contract (*mu'awadhah)* where the donated fund exchange with claim fund. In this condition *gharar* and *maysir* issue, as in conventional insurance, not become the main concern. As we know that surplus is the exclusive rights of the participant for their contribution as *tabarru',* so in this condition *tabarru'* in sharia insurance lost its essence in mutual help, therefore the supervision function of Sharia Supervisory Board (SSB) plays important role in supervising this *tabarru'* application.

The awareness of conscience in each individual Muslim will keep him from any misleading and guide him to be consistence in implementing Allah SWT direction in every activity, as a true Muslim. Nevertheless, Islam has not formulated standard and detailed supervision along with the supervision acts. Islam frees each Muslim to conduct supervision based on social condition experience or the rules that manage the society. The Sharia Supervisory Board function and duty. [21]) to supervise sharia financial institution to fit sharia regulation and principle that has been regulated in fatwa issued by SNB.

5. Conclusion

Sharia insurance is formulated in *tabarru'* contract. Article 1 section 3 of law insurance stated that sharia principle is Islamic law principle in insurance business based on fatwa issued by legal institution in the arrangement of fatwa in sharia region. *Tabarru' contract* using Sharia National Board of Indonesian Ulama Council fatwa as its guidance (SNB-IUC) fatwa No.21//DSN-MUI/X/2001 about general guidelines of sharia insurance, stated. Sharia insurance (*ta'min, tafakul, tadhamun)* is the act of mutual help among a number of participants or parties through investment in the form of *tabarru'* asset that give refunds to face certain risk through contract or engagement in accordance with sharia principle. *tabarru'* contract is every contract which intended to mutual help and virtue, not for commercial purpose. The collected premium become grant manages by the insurance company. Then, the collected grant is used to pay claim to the insurance participant who experiencing misfortune. But there still Sharia Supervisory Board is to supervise sharia financial institution to fit sharia regulation and principle that has been regulated in fatwa issued by Sharia National Board (DSN).

6. Suggestion

The government supervision function in the application of sharia principle in sharia insurance need to be improved, Sharia Supervisory Board (DPS) and Financial

Service Authority (OJK) need to cooperate well in the execution of *tabarru'* contract in sharia insurance, according to Law of Naumber 40 Year 2014 on Insurance.

References

[1] Abbas Salim, Dasar-dasar Asuransi, Raja Grafindo Persada, Jakarta, 1995

[2] Abdullah Amrin, Meraih Berkah melalui Asuransi Syariah, Jakarta: PT Gramedia, 2011

[3] A. Madjedi Hasan, Perjanjian Minyak dan Gas Bumi Berasas Keadilan dan Kepastian Hukum, Fikahati Aneska, Jakarta, 2009

[4] Abdul aziz dahlan dkk, Ensiklopedi Hukum Islam, Ichtiar Baru Van Hoeve, Jakarta, 1996, p 138

[5] Abdul Ghafar Anshori, Asuransi Syariah di Indonesia, UII Press, Yogyakarta, 2007

[6] Abdul Kadir Muhammad, Hukum Asuransi Indonesia, Citra Adytia Bakti, cetakan kelima, Bandung, 2011, p257

[7] Abdul Kadir Muhammad, Hukum Asuransi Indonesia, PT Citra Aditya Bakti, Bandung, 2006

[8] Abdul kadir Muhammad, Pokok-Pokok Hukum Pertanggungan, Alumni Bandung, 1978

[9] Abdul Manan, Hukum Dalam Penyelenggaraan Investasi di Pasar Modal Syariah Indonesia, Edisi 1 , Cet 1, Kencana, Jakarta, 2009

[10] Agus Darmawan, Perspektif Law as An Allocative System Undang-Undang Otoritas Jasa Keuangan, Fiat Justisia Jurnal Ilmu Hukum Volume 8 No. 3, Juli-September 2014 ISSN 1978-518, hlm 390

[11] Agus Suwandono, 2016, Implikasi pemberlakuan Undang-Undang Otoritas Jasa Keuangan Terhadap Perlindungan Konsumen Jasa Keuangan Dikaitkan Undang_Undang Perlindungan Konsumen, jurnal Perspektif, Volume XXI No 1, Edisi Januari, p 6

[12] Ahmad Miru, Perjanjian dan Perancangan Perjanjian, Radja Grafindo, Persada, Jakarta, 2008

[13] Ahmad Rodoni dan Abdul Hamid, *Lembaga Keuangan Syariah*, Cet 1, Zikri Hakim, Jakarta, 2008

[14] AM. Hasan Ali, Asuransi *Dalam Perspektif hukum Islam,* Suatu Tinjauan Analisis Historis, Teoritis, dan Praktis

[15] Ana Rokhmatussa'dyah dan Suratman, *Hukum Investasi dan Pasar Modal*, Sinar Grafika, Jakarta, 2010

[16] Dadang Husen Sobana, Manajemen Keuangan Syariah, CV Pustaka Setia Bandung, ,2018

[17] Gemala Dewi, *Aspek-Aspek Hukum dalam Perbankan dan Perasuransian Syariah di Indonesia,* Jakarta, Kencana, 2007

[18] Muhammad Maksum, *Pertumbuhan Asuransi Syariah di dunia dan Indonesia*, Al-Iqtishad: Vol. III, No. 1, Januari 2011, p 37

[19] Muhammad Nashiruddin al Albani, *Shahih Sunan ibnu Majah*, diterjemahkan Ahmad Taufiq Abdurrahman, Shahih Ibnu Majah, Jilid 11, Cet 1, Pustaka Azzam, Jakarta, 2007

[20] Muhammad Syakir Sula. 2004. *Asuransi Syariah: Life and General Konsep dan Sistem Operasional.* Jakarta: Ge ma Insani Press.
[21] Fatwa No.21/DSN-MUI /X/2001 tentang Pedoman Umum Asuransi syariah,
[22] Burhanuddin S, *Aspek hukum lembaga keuangan syariah,* Edisi 1, Graha Ilmu, Yogyakarta, 2010, p121
[23] Zainuddin Ali, *Hukum Asuransi Syariah,* Sinar Grafika, Jakarta, 2008,
[24] Sofyan Syafri Harahap, *Akuntansi Islam*, Bumi Aksara,cet 1, 1997, p 99
[25] Novi Puspitasari, sejarah dan perkembangan asuransi islam serta perbedaannya dengan asuransi konvensional, JEAM Vol X No. 1/2011, ISSN: 1412-5366, p 38

14

Conserving Dragonfly Natural Habitat in Andalas University Campus Complex to Develop a Sustainable Thematic Ecotourism

Muhammad Nazri Janra[1a], Henny Herwina[2]

[1,2]Biology Department, Faculty of Mathematics and Natural Sciences, Andalas University

[a)] Corresponding author: mnjanra@sci.unand.ac.id

Abstract

In ecotourism, the existence of birds, mammals and other big animals have been utilized as a part of the attraction. Meanwhile, little has been done to engage insects within the ecotourism scheme. In this paper, we discuss the inclusion of dragonflies, which are well-studied at the campus complex of Andalas University in Limau Manis, as the main attraction for ecotourism enthusiasts. We created an online survey to assess dragonfly's common perception as the main attraction in an ecotourism activity. Of 73 respondents participates, 91.9% agreed with the possibility of this idea, 56.8% stated their willingness to pay for ecotourism with dragonfly watching activity in it and 73% thought that dragonfly as equal as birds or other animals subjected in ecotourism. Furthermore, we propose a model of ecotourism-based campus management in this paper to encourage the establishment of dragonfly-watching ecotourism activity where the sustainability of dragonflies' habitats, water resource and water catchment area for campus and surrounding community are integrally considered.

Keywords: dragonfly-watching, ecotourism, survey, tourists, water catchment area

1. Introduction

Ecotourism is different from traditional tourism in the sense of its core lies in the encouragement of responsible travel to natural areas where the conservation of natural resources and sustainability of the well-being of the local community are maintained [1,2]. Since the introduction of the ecotourism term in the 1980s, the concept has greatly evolved [3,4]. Moreover, in some places, ecotourism also involves interpretation and education for both hosts and guests, in which the three fundamental principles, namely environment, economy and community well-being are sufficiently promoted [5]. Ecotourism has proven to provide support toward conservation of nature as it educates locals relating to the value of biodiversity and natural landscapes [6]; it also helps preserve local cultures and give economic benefits to the community [7].

As ecotourism mainly bases on the interest of the environment and natural resources, it uses what people perceive interesting mostly in nature. Birdwatching is among ecotourism prominences, where tourists spend approximately $1,884 (or currently accounted into around $3,500) annually for equipment, field guides, travel, accommodation and food [8]. Most birdwatchers are conservation aware and have a willingness to participate in conserving their ecotourism destination either through funding, community education or other efforts [9]. On the other hand, ecotourism is in constant need for the novelty as its core for attraction to keep inviting the visitors. Eco-tourists then introduced and drawn into, new concepts of tourism such as flora tourism in festivals or shows and watching the wildflower blooming [10,11,12] or what so-called as ecotourism [13,14]. The later concept of ecotourism based its attraction on the use of insects as their products. Insects possess great potential as an asset in ecotourism from its vast number of species, the unique of their biological aspects despite ordinary negligence from humans due to lack of awareness [15]. Dragonfly is among potential insects for ecotourism due to their noticeability, large size, colorful and attractive behavior [16].

This study aims to examine the possibility of dragonflies as tourism attraction within the boundary of Andalas University's campus complex. We will outline the diversity of dragonfly species in the surrounding campus complex, the problem faced by their habitats, especially the forested one, followed by assessing the potential ecotourism enthusiasts to participate in dragonfly-based tourism. We also present the ecotourism concept where the conservation of dragonfly habitats fitted into the scheme where any potential component is involved.

2. Research Method

2.1 Inventory of dragonfly in Andalas University's campus complex

The inventory was achieved through a literature review and field survey conducted at the proper habitats in the surrounding campus complex. The survey method referred to the recent publication on dragonflies from Andalas University's campus complex

[17] using a photographic approach that is considered a non-invasive survey method. This publication also served as the initial inventory for odonate species in Andalas University's campus complex, complemented with the progressive record resulted from ongoing field observation. Some odonata guides relevant for Sumatra region were used to identify species that not yet recorded in the previous works [18,19,20]. Dragonfly species were then grouped into table and assessment on their attractiveness, spotting difficulty, local abundance status (judged from encounter frequency), and their habitats. A species' attractiveness was subjectively evaluated through the color composition and variation, albeit each species may retain its uniqueness in coloration. Due to this consideration, the judgment will be in the qualitative measure indicated with an asterisk. The more the asterisk, the species perceived to be more attractive. Meanwhile, habitat condition justified during the fieldwork by referring to habitats detailed in Avifauna Limau Manis [21].

2.2 Perception on dragonfly-based ecotourism

A questionnaire form was prepared to assess how people perceive the concept of dragonfly-based ecotourism. Ten questions were distributed through online google document for a week started from 6 August 2019; they consisted of three questions related to the traveling habit, another three on recognizing ecotourism concept, and four questions to explore the possibility of the dragonfly-based ecotourism. To maximize the targeted respondents' reaching, the link for questionnaire (https://docs.google.com/forms/d/e/1FAIpQLSfxTUOxR1vTFFzlVCWyXp6Ad73RUEjFJozwRACDce2BABGZkw/viewform?usp=pp_url) was disseminated using various social media groups. At the end of the online survey period, the summary of the questionnaire was retrieved into an excel file to calculate the tendency of response for each question item. The data then outlined descriptively.

3. Results

3.1 The diversity of dragonfy in Andalas University's campus complex and their habitats

There were initially 27 species of dragonflies and damselflies recorded from previous work on 2018 [17]. Through the current study, where some fieldworks that were conducted between late 2018 to mid-2019, we added more species that turned the list into 36 species (Appendix 1). This increment added more than 30% of new species into the species inventory. These additions show the tendency that there are more species that will be potentially recorded from this area given time in the future (Figure 1).

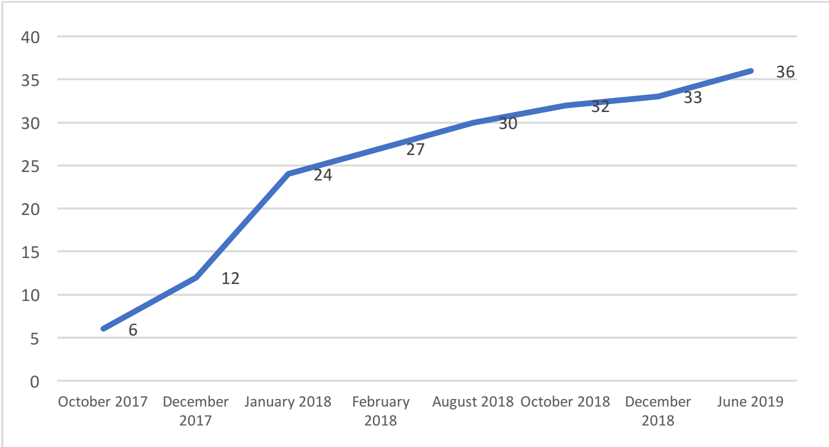

Figure 1. Timely inventory of dragonfly species from Andalas University's campus complex (improved from Janra 2018)

Some Zygopteran species, such as *Neurobasis chinensis*, *Vestalis luctuosa* (Calopterygidae), *Heliocypha angusta angusta*, *Libellago lineata* (Chlorocyphidae) and *Euphaea variegata* (Euphaidae), are assessed as the beautiful ones due to their color composition and variation. Similar attractiveness is also perceived for Anisopterans from Aeshnidae, Macromiidae and some Libellulidae species. They are sufficiently aesthetic to be the objects in ecotourism. The fact that many odonates are sexually dimorphism, including those deemed beautiful above, emphasize the pool of odonate forms to be shown as the ecotourism products. The attachment of most of these species to clean water and pristine habitats also increase the possibility for including them into a dragonfly-based ecotourism scheme, as enjoying natural scenery is also essential in it.

Several species, such as *Drepanosticta* cf *bispina* (Platystictidae), *Heliocypha angusta angusta* (Chlorocyphidae) and *Gomphidia maclachlani* (Gomphidae) are scientifically valuable for some reasons. The rarity, elusiveness is probably among the reasons for *Drepanosticta* cf. *bispina* and *Gomphidia maclachlani* to become understudied. While *Heliochypa angusta angusta* is recently confirmed as separate species from *H. a. oceana*, *H. vantoli* and *H. fenestrata* which are almost morphologically identical at glance [22]. In turn, the scarcity but known existence of these species in Andalas University' campus complex can create additional value for the tourists, especially those who have academic and scientifc interest to them.

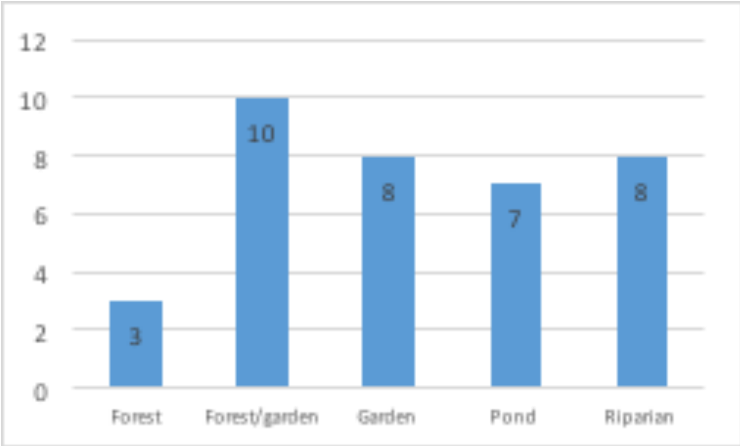

Figure 2. Total dragonfly species per habitat in Andalas University's campus complex

Appendix 1 also indicates that garden becomes the habitat with most species exist (18 species), followed with forest (13 species), riparian (8 species) and pond (7 species). Garden and pond are artificial or semi-natural habitats for odonates in Andalas University's campus complex, while forest and riparian sites are the natural ones. In Andalas University's campus complex, natural habitats of dragonfly located mostly in forested area on the east side of campus. Our field survey confirmed that these habitats are vulnerable due to the severity of human activities therein. Local people from surrounding communities usually enter the forest to extract forest products (e.g. timber, rattan), to do hunting on birds or mammals, as well as other possible malignant conducts to the forest and environment. As one major upstream area for Padang City, the forested area around Andalas University requires special attention for its sustainability.

Plate 1. Species assessed with high attractiveness: *Neurobasis chinensis* (top), *Heliocypha angusta angusta* (middle), *Euphaea variegata* (bottom)

3.2 Perception on Dragonfly-based Ecotourism

A total of 73 respondents voluntarily participated in filling the online questionnaire we distributed. According to gender, 45 respondents are males, and 28 are females. As many as 31 of them work as a university lecturer, 12 persons have an occupation as a state employee, 8 persons are in private sectors, 10 persons are students, and the rest in various occupations. The respondents' domicile across the Indonesian archipelago, concentrated more on Java (38 respondents) and Sumatra (17 respondents). The use of social media to disseminate our online questionnaire has helped reach further respondents, including those who reside in the eastern part of Indonesia, such as Nusa Tenggara, Maluku or Papua (Plate 2).

When looking at the respondents' traveling aspects, more than half (55%) are frequent travelers, and as many as 17% of respondents travel more often than others (more than twice a year). The majority of them (85%) spend between 1-5 million IDR during their travel, and only 1% of the respondents travel on expense more than 10 million IDR. Meanwhile, 75% of the respondents choose to go to enjoy natural tourism objects during their traveling time (Plate 3).

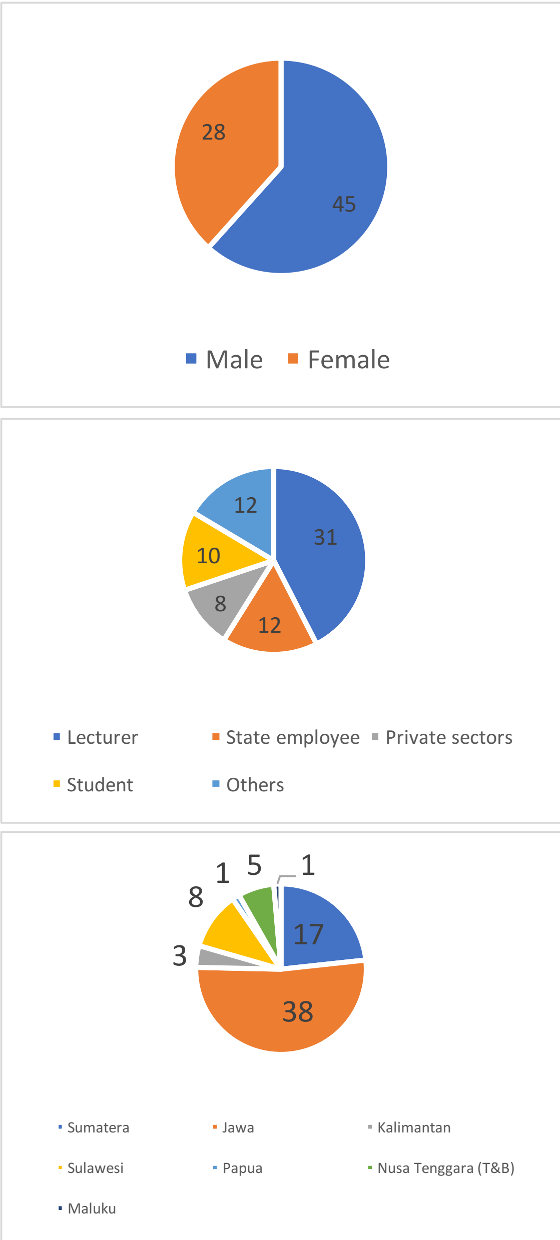

Plate 2. General demography of the respondents; sex (top), occupation (middle) and residence (bottom)

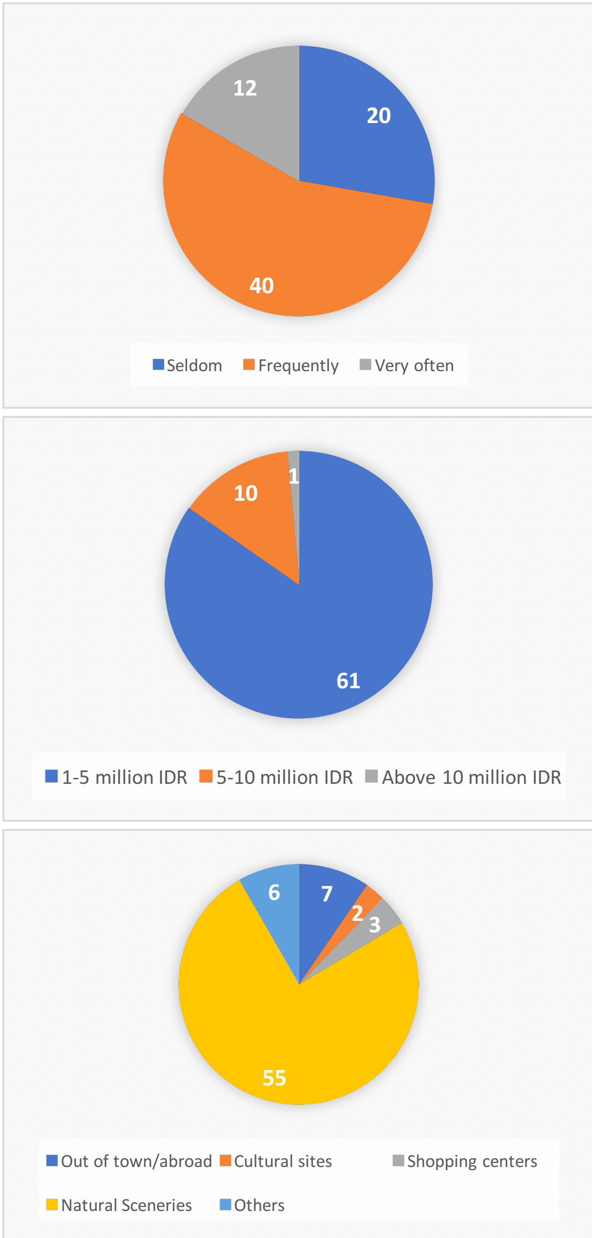

Plate 3. Travelling aspects of the respondents, which include travelling frequency (top), expense (middle) and destination

The questionnaire's ecotourism part revealed that most respondents (71 persons) know or familiar with the concept, while only 2 respondents admitted not knowing it. On the other hand, 58 respondents believe that they have ever been involved with ecotourism conduct, while 12 respondents feel undecided, and 3 respondents said they never got into it. However, when asked whether they want to do ecotourism within the near future, 41 respondents were not answered, 29 respondents returned with a positive answer, and only 3 people remain undecided (Plate 4).

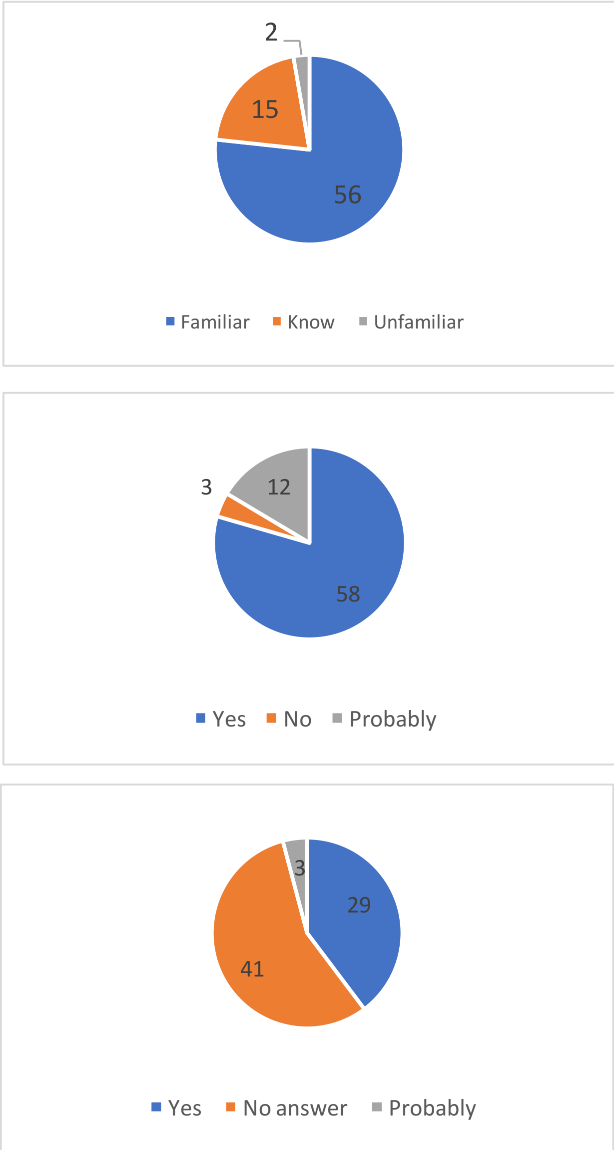

Plate 4. Ecotourism aspects of the questionnaire; knowledge (top), involvement (middle) and willingness (bottom)

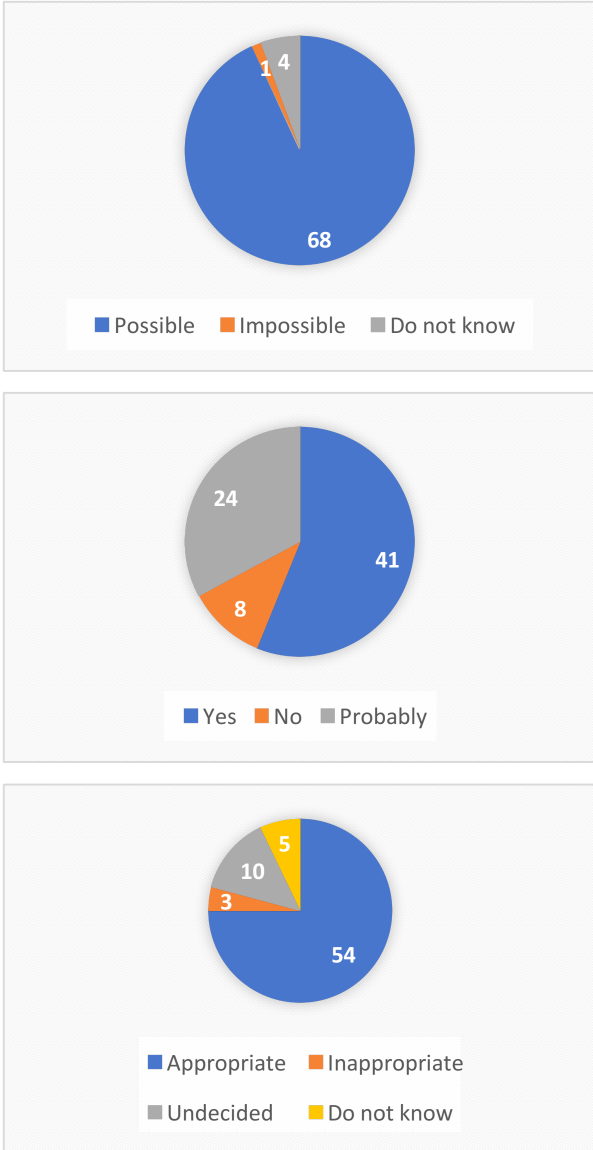

Plate 5. The dragonfly within the ecotourism concept; possibility (top), willingness to pay (middle) and

Now enter the dragonfly into the ecotourism concept proposed in this paper. Almost every respondent correctly defined dragonfly as either insect, colorful creature or predator, except one who answered with “something delicious” (the chart is not presented for this question due to these questions' exploratory nature). Sixty-eight respondents supported the possibility to include dragonflies into the ecotourism scheme, especially as the main attraction in the tourism destination. Only one respondent refuses this possibility, and the other four were abstaining. When being asked if the respondents are willing to pay to see the dragonflies in their natural habitat, 41 of them agree to pay, 8 declined while the other 24 were undecided. The last question in this part was about the appropriateness of dragonfly as an ecotourism attraction, where 54 respondents supported the idea, 3 of them refused, 5 said they possess no knowledge on this matter and 10 respondents were undecided (Plate 5).

4. Discussion

4.1 The diversity of dragonfly and its role in ecotourism

There has been very little information regarding the relationship between the dragonfly community and ecotourism in Indonesia. Some studies focused on recording species inventory at the surrounding of a tourism destination (usually the natural sites) or the function as bio-indicator for environmental health, without detailed information regarding their benefit to the tourism activities [23,24,25]. In Asia, odonates have been long served as part of traditional cuisine [26,27], although in some other parts of the region, there are ceremonies and festivals devoted to this insect [28]. Asian countries have deeper historical roots related to various insects, especially dragonflies [29]. In Europe, America, or Canada, it is found that people engaged with dragonflies through recreation and tourism activities, and to some extent, in collecting them for some purposes, including for fun. Also, most people involved in the event came from those with considerably high educational level or related to naturalist groups [29]. There is no exact data regarding this type of ecotourism or the demographic data of its goers in Asia.

The questionnaire respondents regarding dragonfly-based ecotourism showed a positive response, with most of them knowing about the ecotourism concept and seemed enthusiastic with dragonflies as tourism products. This result was in line with some previous research, mainly on general insects as the tourism products [16,30,31,32]. Dragonflies innately possess most of the critical characters for being right tourism products, as stated by the United Nations Development Program; endemism, rarity, sighting reliability, morphological enticement, safety, and linkage to the local culture [16,33]. Observing the respondents' opinion, it is clear that they are most interested in the dragonflies' morphological appearance. However, this good signal toward implementing dragonfly-based ecotourism should be followed up with the next efforts to realize it, especially through communication, awareness, and promotion programs.

In Indonesia, dragonfly watching (or dragonflying) tour is known provided by the Indonesia Dragonfly Society (IDS) in a somewhat formal manner [see indonesiadragonfly.org]. This organization also sponsors annual event of Indonesian Dragonfly Jamboree and biannual dragonfly gathering that provides a venue for dragonfly enthusiasts, either from domestic or abroad, to congregate, share experience, update the recent development on national and general odonatology and of course' hunting' and enjoying the dragonfly diversity around the gathering spot. Nevertheless, until recently, there is no published report regarding the dynamics of this entotourism activity. Hence, it is not easy to assess the implementation of dragonfly-based ecotourism in Indonesia.

4.2 Dragonfly-based ecotourism in Andalas University's campus complex landscape

Located in the adjacent to the forested area of Bukit Barisan mountain chain, the Andalas University's campus complex was awarded beautiful natural sceneries, either the green of its forest on the eastern campus side or the view the Indian Ocean on the west. Campus visitors, such as students' family and relatives or just occasional guests and passers, enjoy the charming location of the campus and sometimes use their visitation as incidental picnic time. Unfortunately, the campus authority does not yet see this opportunity as a potential income gathering for the campus. The campus authority is the main party to manage an integrated ecotourism system where many other stakeholders can be involved and benefitted from it.

The implementation of ecotourism based on campus or university management is very applicable due to several reasons. First, in the case of Andalas University's campus complex, the main asset for ecotourism has been provided by the landscape of complex itself, which includes any biodiversity existing therein. Secondly, the campus houses staffs who mainly consist of scholars and academicians; they are the main headliners in this ecotourism setup. The wide array of college scholars and academicians at Andalas University can serve as the think-tank, which provides their expertise in formulating the most appropriate concept for ecotourism in campus areas. They can also resolve any possible problems that emerged during the implementation of ecotourism. Thirdly, for students, whom resource availability keeps replenished each year through new admission, they are perceived as the spearhead in this ecotourism scheme as they can directly interact with the consumers of ecotourism, either being field staff, guides or other active roles. The ecotourism provides an excellent medium for training and gathering experience, even as practicing sessions for applying the classroom theories.

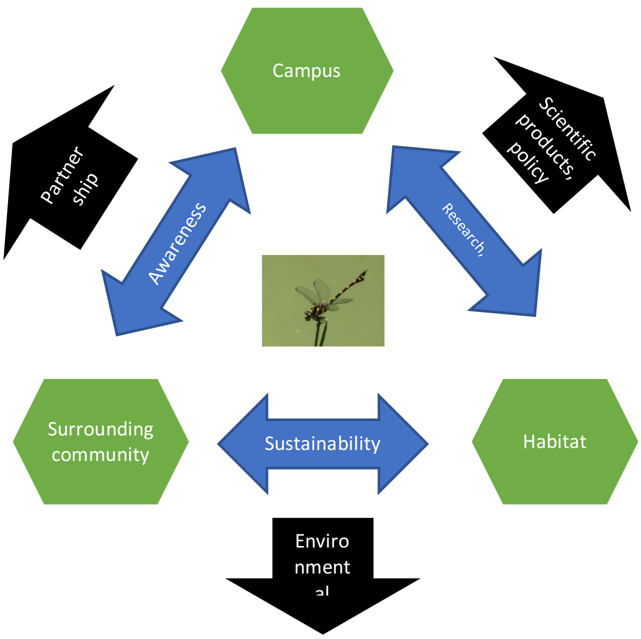

Figure 3. Dragonfly-based ecotourism within the setting of Andalas University's campus complex

One stakeholder that usually excluded from the equation or the concept is the local community. They have been identified as important components to conserve the environment in Andalas University's campus complex [21]. The ecotourism model in Figure 3 shows the local community's ideal involvement surrounding the campus complex through mutual partnership within the ecotourism scheme. Local wisdom, which may become an innate part of their livelihood, is useful in either the tourism process or the conservation of natural resources within the campus environment. For those who used to work exploring and exploiting forest for getting daily income, their skills and knowledge are essential in implementing ecotourism. Many examples point out the change of the local community's habit from merely extracting forest products, turned into the conservationists of their environment whenever they work within the ecotourism framework [34]. The community encouraged to see the real value of their environment in a sustainable way rather than consumptively. Ecotourism has been believed to bring direct and indirect benefits into the conservation effort in a certain area, as it contributes financially through cash donation made by the tourist into particular conservation of community causes [35,36]. Most ecotourism enthusiasts and costumers come from an educated community, which indirectly helps raise awareness within the local community during their visitation [9, 29]. The conservation-aware and wealthy community is believed to be the key to the successful conservation effort in an area [37,38]. The model suggests that the local community can take advantage of their cooperation with campus authority, scholars, and academicians by getting information and awareness regarding nature conservation and benefitted in financial and educational aspects when they interact and gain experience with the consumers of ecotourism. Within this ideal condition, the discourse to conserve the environment while bringing prosperity toward the surrounding community of Andalas University will be possible.

5. Conclusion

This research was conducted to seek the possibility of implementing dragonfly-based ecotourism within the setting of Andalas University's campus complex. Ecotourism's global popularity may favor this effort; however, the positive sentiment for dragonfly-related tourism still needs to be tested and implemented for its feasibility as this scheme is rarely applied globally. Inclusion of dragonflies as ecotourism products promises support to the conservation of habitat in the surrounding campus area, particularly when the local community involved in the implementation.

This paper's idea can act as the core to implement the dragonfly-related ecotourism within Andalas University's campus complex. The trial can be arranged and supervised by the Tourism Center of Andalas University by involving such parties identified in the paper. Meanwhile, we hope to assess the effectiveness of social media as a marketing tool for dragonfly-related tourism and the perception and willingness to be involved from the surrounding community within this tourism concept for the future research topic.

Acknowledgment

The authors thank the organization members KCA-LH Rafflesia FMIPA Unand for their help providing manpower, field equipment and some logistics during our field surveys. The authors also appreciate Irviandi Yonanta and biology students batch 2019 in Andalas University for their tremendous help during the field time.

References

[1] S. Charnley, “From nature tourism to ecotourism? The case of the ngorongoro conservation area, Tanzania,” Human Organization, vol. 64(1), pp. 75-88, 2005.

[2] M.E. Wood, Ecotourism: Principles, practices and policies for sustainability. Paris: United Nations Environment Program, 2002.

[3] R.K. Blamey, “Principles of ecotourism.” In: D.B. Weaver (ed.) The encyclopedia of Ecotourism 4-22. Wallingford: CAB International, 2001.

[4] H.M. Donohoe & R.D. Needham, “Ecotourism: the evolving contemporary definition,” Journal of Ecotourism, vol. 5(3), pp. 192-210, 2008

[5] TIES, “The international ecotourism society. Principles of ecotourism. Accessed on 2 October 2019 from https://www.ecotourism.org/what-is-ecotourism, 2015

[6] N.L.H. Son & N.T. Van, “Developing bird watching ecotourism combined with education and natural conservation,” VNU Journal of Science: Earth and Environmental Sciences, vol. 27(2), pp. 89-97, 2016

[7] J.T. Mgonja, A. Sirima, and P.J. Mkumbo, “A review of ecotourism in Tanzania: magnitude, challenge, and prospects for sustainability,” Journal of Ecotourism, 2015. DOI: 10.1080/14724049.2015.111462.

[8] P. Kerlinger & D. Wiedner, “Economics of birding: A national survey if active birders,” Birds, vol. 44, pp. 2019-213, 1990.

[9] R. Steven, J.C. Smart, C. Morrison & J.G. Castley, “Using a choice experiment and birder preferences to guide bird-conservation funding,” Conservation Biology, vol. 31, pp. 818-827, 2017.

[10] C.M. Hall, M. James & T. Baird, “Forests and trees as charismatic mega-flora: Implications for heritage tourism and conservation,” Journal of Heritage Tourism, vol. 6(4), pp. 309-323, 2011

[11] C. Pickering & M. Ballantyne, “Orchids. An example of charismatic megaflora tourism?” in The Routledge handbook of tourism and the environment, A. Holden& D. Fennell, eds., London: Routledge, 2013, pp. 192-199,

[12] M. Kruger, A. Viljoen & M Saayman, “Who pays to view wildflowers in South Africa?” Journal of Ecotourism, vol. 12(3), pp. 146-164, 2013

[13] M. Mohamed, “Entotourism,” in Proceeding on 1st Sabah Tourism Symposium. Kota Kinabalu, Sabah: UMS, 2000, pp. 1-13.

[14] M. Mohamed, I.A. Afifa, I. Nurhidayah & S.Y. Salwa, “Insect collection and potential of entotourism at Gunung Chamah, Kelantan.” In Gunung Chamah Kelantan: Pengurusan hutan, persekitaran fizikal, kepelbagaian biologi dan pelancongan ekologi. Kelantan: State Forestry Department, pp. 218-233

[15] M.S. Hamdin, M. Mohamed & L. Tokiman, “Potential of entotourism at Taman Negara Johor Endau Rompin,” International Journal of Administration and Governance, vol. 1(4), pp. 92-97, 2015.

[16] M.L. May, “Odonata: who they are and what they have done for us lately: Classification and ecosystem services of dragonflies,” Insects, vol. 10, pp. 1-17, 2019

[17] M.N. Janra, “Inventory of dragonflies and damselflies (Odonata) in Andalas University’s LImau Manis Complex, Padang: Using photographical approach,” Jurnal Natural, vol. 18(2), pp. 89-96, 2018
[18] J. Setiyono, S. Diniarsih, ENR. Orcilata & N.S. Budi, Dragonfly of Yogyakarta. Jenis capung Daerah Istimewa Yogyakarta. Yogyakarta: Indonesian Dragonfly Society, 2017
[19] K. Rembold & A Schröter, Dragonflies and damselflies of the EFForTS study area in Jambi and Bogor (Indonesia). Version 2. Biodiversity, Macroecology & Biogeography, Germany: Faculty of Forest Sciences and Forest Ecology of the University of Goettingen, 2017.
[20] D. Bárta & A. Dolnẏ, Dragonflies of Sungai Wain. Ecological Field Guide to the Odonata of Lowland Mixed Dipterocarp Forest of Southeastern Kalimantan, Czech Republic: Taita Publisher, 2013
[21] M.N. Janra, Avifauna Limau Manis, Depok: Rajawali Press, 2019.
[22] M. Hämäläinen, “Description of *Heliocypha vantoli* spec. nov. from Siberut in the Mentawai Islands (Odonata: Chlorocyphidae),” Zootaxa, vol. 4079(4), pp. 495-500, 2016
[23] S.O. Hanum, S. Salmah & Dahelmi, “Dragonflies species in Kandi Wildlife Park Area, Sawahlunto City, West Sumatra,” Jurnal Biologi Universitas Andalas, vol. 2(1), pp. 71-76, 2013
[24] E.B. Syarifah, F. Narti & F. Wijayanti, “The diversity of dragonfly (Odonata) at Miniature Park of Beautiful Indonesia and Ragunan Zoo, DKI Jakarta, Indonesia [Keanekaragaman capung (Odonata) di Taman Mini Indonesia Indah dan Taman Margasatwa Ragunan, DKI Jakarta, Indonesia],” Bioprospek, vol. 13(1), pp. 50-58, 2018
[25] F. Wahyuni, Moerfiah & S. Wiedarti, “The diversity of dragonfly (Odonata) as bio-indicator of environmental quality in tourism area Cangkuang, Sukabumi, West Java [Keanekaragaman capung (Odonata) sebagai bioindikator kualitas lingkungan di kawasan Wana Wisata Cangkuang, Sukabumi, Jawa Barat],” Jurnal Online Mahasiswa Bidang Biologi, vol. 3(3), pp. 1-5, 2017
[26] N. César, “Des libellulides dans l’assiette: les insects concommes’ a Bali,” Insectes, vol. 3(4), pp. 3-6, 2006
[27] W. Keith, “The dragon hunter,” National Geographic Explorer, September edition, pp. 4-9, 2005
[28] A.B. Gurung, “Insect – A mistake in God’s creation? Tharu farmers’ perception and knowledge of insects: A case study of Gobardiha village development committtee, Dang-Deukhuri, Nepal,” Agriculture and Human Values, vol. 20(4), pp. 337-370, 2003
[29] H. Lemelin, “Goodwill hunting: dragon hunters, dragonflies and leisure,” Current Issue in Tourism, vol. 12, pp. 553-571, 2009
[30] M. Mohammed., M.C. David, N.A.b.M. Razali & F.A. Rajini, “Inventory of insects groups in Gunung Ledang, Johor, Malaysia,” Serangga, vol. 19(2), pp. 1-29, 2014
[31] M.S. Hamdin, M. Mohamed & L. Tokiman, “Potential of entotourism at Taman Negara Johor Endau Rompin,” International Journal of Administration and Governance, vol. 1(4), pp. 92-97, 2015
[32] F.H. Saikim, A.K.M.R.b.A.K Matusin, N.M. Suki & M.M. Dawood, “Tourists perspective: Inclusion of entotourism concept in ecotourism activity,” Journal of Tropical Biology and Conservation, vol. 12, pp. 55-74
[33] B. Kelyin, L. Kiruba-Devi, D.T.W. Chew & M. Maryati, “Anurans (frogs and toads): New nature tourism products for conservation and local people well-being,” in Borneo in the new century, Proceeding of the 8th Biennieal International Conference of the Borneo Research Council 2006, Kota Samarahan: Borneo Research Council/Institute of East Asian Studies, 2006

[34] F. Higgins-Desbiolles, “Indigenous ecotourism’s role in transforming ecological consciousness,” Journal of Ecotourism, vol. 8(2), pp. 144-160, 2009
[35] R.C. Buckley, “Ecological indicates of tourist impacts in parks,” Journal of Ecotourism, vol. 2, pp. 54-66, 2003
[36] R. Beunen, H.D. Regnerus & C.F. Jaarsma, “Gateways as a means of visitors management in national parks and protected areas,” Tourism Management, vol. 29, pp. 138-145, 2008
[37] G.S.M. Andrade & J.R. Rhodes, “Protected areas and local communities: an innevitable partnership toward successful conservation strategies?” Ecology and Society, vol. 17(4), pp. 1-16, 2012
[38] E. Garraway, J. Parnell & D.S. Lewis, “Successful community-based conservation: The story of Millbank and *Pterourus (Papilio) homerus*,” Insects, vol. 8, 69, pp. 1-12

About the authors

Muhammad Nazri Janra graduated on 2003 from Biology Department in Andalas University, majoring ornithology. He then continued assigned as the faculty staff in his almamater before accomplishing two master degree in integrated natural resource management and in ecology and evolutionary biology. His current focus lay on bio-conservation, vertebrate taxonomy, behaviour and ecology.

Henny Herwina, accomplished her Phd at Kanazawa University, Japan on 2005. She was appointed as the staff then the head in Animal Systematic Laboratory, Biology Departement in Andalas University from 2006 until now. She majored in entomology, whose current research focus on insect ecology