

# THE EFFECTS OF E-TOURISM TO THE DEVELOPMENT OF TOURISM SECTOR IN INDONESIA

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**Abstract**—Indonesia is a nation that ethnically and culturally unique and diverse. It has potentials to leverage the growth of its tourism sector. The sector has become important to boost not only regional and also nationwide economic development. It can be growth further to a much larger scale by effectively utilising the pervasiveness of the information and communication technology (ICT). For example, ICT may facilitate the growth with e-tourism, which is an Internet-based marketing method. This work intends to understand the potential of using e-tourism and its effects on the development of the sector. Specifically, the study evaluates how the aspects of marketing, business, and e-tourism are affected by the use of ICT and how they affect the growth of the tourism industry. A multivariate regression model is constructed to assess the case quantitatively. The empirical model suggests that the e-tourism may contribute the growth of the tourism sector by about 40%.

**Keywords:** Cultural Diversity; Tourism; Marketing; E-tourism; Indonesia

## I. INTRODUCTION

Tourism has been an important economic sector in Indonesia for many years and continues to grow. By 2013, it had contributed Rp 347 trillion to the total of Rp 1502 trillion of the nation gross domestic product. It increased by 5.7% in 2013 and 9.39% in 2014 [1]. It ranked the fourth on the list of foreign exchange earner. In the list of ASEAN tourism competitiveness released by the World Economic Forum in 2013, Indonesia ranked 70th, higher than Brunei (72), Vietnam (80), the Philippines (82), and Cambodia (106). In the previous year, Indonesia was ranked 74.

Tourism is known to be one of the sectors that may take benefits of the development in the information and communication technology [2]. The sector is rich with information that can be distributed to a large audience easily using ICT [3]. The technology has a

huge role to the success of the e-commerce of the tourism industry [4, 5].

Indonesia has 55 Million Internet users with the penetration rate of 22.1% [6]. This number is huge and offers a great opportunity to the e-commerce of the tourism industry.

ICT provides the tourism sector one of the most important instruments to success in e-commerce. It provides e-marketing, which is an innovative technology-based marketing to mediate companies and their customers [7]. It is a new and cost-effective means to interact and deliver services to customers [8–10]. It provides customers access to required and crucial information [7]. For the reasons, a number of research works have been focused on various aspects of e-marketing: from the consumer perspectives [11, 12], from business perspectives [13], and from its effects on the tourism industry performance [14–16]. Some sub-sectors would be strongly affected by ICT [17].

E-commerce, in general, does not only providing e-marketing but the transactions of products with ICT as intermediary [18]. It has been growing dramatically [19] and is allowing company-customer interaction to occur in a more deeper level [20].

The Internet has become a main distribution channel in e-tourism [20–23]. It has the industry to eliminate so-called booking agents, which often have negative images [20, 21, 24–27]. It is an effective media to attract tourists [27]. Therefore, ICT has closed the gap between the customers and service providers and should be strategically included with tourism information package [5]. Some other relevant studies are presented in Table I.

This research intends to understand to which extent the use of e-commerce contributes to the success of the tourism industry, or in another word, how far does the e-tourism increase the economic size of the

TABLE I  
SOME RELEVANT STUDIES ON E-TOURISM AND THEIRS ATTRIBUTES, DIMENSIONS, AND TOPICS OF DISCUSSION.

Source	Dimension	Topic
Ref. [14]	Performances, Market Orientation, Relationship and E-Marketing	Market orientation and E-marketing
Ref. [20]	Internet Usability, Applications, Attitudes, Perceptions, and Disadvantages	Attitudes on internet adoption
Ref. [5]	Potential, Utilization, Effectiveness, Transformation and Optimization	E-tourism
Ref. [19]	Service Quality, Ease of Purchasing, Usefulness, Incentive, and Relationship Quality	E-tourism
Ref. [27]	Distribution Sites, Classification, Inhibiting Factors, Success Factors, Staging, Functions, and Features	E-tourism

tourism industry. The study results are important for the stakeholders in both private and public sectors.

## II. RESEARCH METHOD

This research is performed to understand how the internet marketing and business affect the growth of the tourism section. For understanding the issue, the empirical data are collected by questionnaire, which is distributed via email to a sample of the population of the study. The population of this research consists of the tourists who travel a lot. The data are collected for two weeks. The distributed questionnaire contains a number of the closed questions to measure the respondent attitudes, opinions, and perceptions. The Likert scale is used with five levels of choices: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree.

The current study intends to establish the relations depicted in Fig. 1. Specifically, those relations are stated as the working hypotheses  $H_1$  to  $H_4$ .

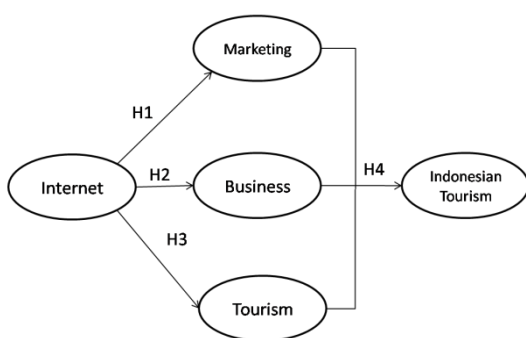


Fig. 1. The Current Research Framework.

$H_1$ : There is a positive influence between the use of the Internet with the development of tourism marketing.

$H_2$ : There is a positive influence between the use of the Internet to increase sales in the field of tourism.

$H_3$ : There is a positive impact on the spread of Internet usage information via the internet tourism.

$H_4$ : There is a positive effect of the use of e-tourism to the tourism development in Indonesia.

From the mathematical perspective, the relation is written in a multivariate-regression form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3, \quad (1)$$

where  $Y$  is the level of the development in the tourism sector in Indonesia,  $X_1$  is the level of e-marketing activities,  $X_2$  is the level of e-commerce activities,  $X_3$  is the level of the Internet contribution.

## III. RESULTS AND DISCUSSION

More than a hundred responses were obtained from the questionnaires where 67.1% are women and the majority were within 19–35 years-old.

First, we analyze the left part of the model depicted in Fig. 1 to learn how the Internet and its usage facilitates e-marketing, potentially increases the sales, and facilitates e-tourism. We use the Pearson’s correlation coefficient to evaluate the relation. The results, provided in Table II, suggest that those variables the use of the Internet may significantly be related to the growth in the marketing, sales, and dissemination of the tourism-related information.

The second part of the model is to see how the variables of marketing, business, and tourism in conjunction with the Internet, as a whole, increase the Indonesia tourism, or to evaluate the applicability of the mathematical model of Eq. (1).

The results of the analysis are tabulated in Table III. The  $R^2$ -value of the model is 0.42, which suggests

TABLE II  
THE RELATEDNESS OF THE INTERNET VARIABLE AND THE MARKETING, BUSINESS, AND TOURISM VARIABLES IN THE TERM OF THE PEARSON CORRELATION COEFFICIENT  $r$ .

Variable #1	Variable #2	$r$
Internet	Marketing	0.507
	Business	0.542
	Tourism	0.534

that the three variables are not encompassing the all aspects that may increase the sector, but the selected variables contribute rather significantly. Similarly, the assumption that the three variables can be related to the increasing of the e-tourism sector is also supported by the result of the  $F$ -test in Table III.

TABLE III  
THE RESULTS OF THE GLOBAL  $F$ -TEST FOR THE MODEL DEPICTED IN EQ. (1).

Model	SS	df	MS	F	Sig.
Regression	7.042	3	2.347	15.742	0.000
Residual	9.841	66	0.149		
Total	16.883				

#### IV. CONCLUSIONS

The richness, diversity, and uniqueness of Indonesia culture have helped the nation to growth its tourism sector. This work studies to which extent the application of the pervasive information and communication technology leverages the development of the sector. Specifically, it evaluates the internet-based marketing method and its potentials to grow the industry. The study evaluates how the aspects of marketing, business, and e-tourism are affected by the use of ICT and how its affects the industry growth. To quantify the issue, an empirical model that relates those variables is established via a multivariate regression model. Finally, the model predicts that the e-Tourism may affect the development of tourism sector in Indonesia significantly by 41.7%.

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