The Impact of Digital Capability on Long Tail Tourism Marketing in Marine Tourism Destination

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Abstract: The objective of this study is to identify how digital capability affects the performance of long-tail tourism marketing in marine tourism destination in Indonesia. Internet and digital technology have led changes in tourism products to be more specific and fragmented or known as long tails. More significant demands for niche products have made popular products' demands or short heads, tend to decrease. When combined together, long tails can become more significant than brief leaders. Questionnaires from 134 yachting tourists visiting 20 marine destinations, participating in Wonderful Sail to Indonesia yacht rally were collected. It is analytical research using Structural Equation Modeling (SEM). The results show that there is a significant effect of the digital capability to the long tail of tourism marketing, especially on the aspects of tagging capability, manage big data, and develop the internet of things. In addition, the development of specialization, differentiated and personalized tourism destinations are the critical factors to ensure the success of long-tail tourism marketing. Based on the result, it is essential for tourism destination to gain digital capability in order to be successful in benefitting from the application of long tails tourism, especially in the marine tourism industry.

1 INTRODUCTION

The world today is facing digital economy challenges (Freitas et al., 2016), the digitized information, and ICT infrastructure based economy (Zimmerman, 2000). In the tourism industry, the development of ICT has influenced tourism for more than 40 years (Buhalis & Soo, 2011), and did a disruptive tourism business (Karimi & Walter, 2015). Digital technology makes companies need to redefine traditional business strategy into the modular process, well distributed, cross-functional and global which enable works done beyond the limitation of time, distance and function (Freitas et al., 2016). Digital technology transforms social relationships both customers and businesses with social media and social networks (Kohli and Grover 2008).

According to Dickinson et al. (2014), digital technology, particularly mobile and smartphone technology in the tourism sector has led tourist destinations connected with tourists through information provision, location-based data and social information sharing. Digital technology becomes robust tools for tourists when travelling. Smartphone becomes a tourism partner, and tourism becomes fertile land for digital business and mobile computing (Cheverst, Davies, Mitchell, Friday, & Efstratiou, 2000).

The rapid development of ICT and massive growth of internet users, causing tourism travel planning to be the main reason for internet use in the tourism sector, since tourists use the internet to search for information, making reservations for tourism products such as aeroplane tickets, buses, trains, hotels, attraction tickets and so on, to a medium to share the travel experience (Buhalis & Soo, 2011). Therefore, business organizations and industries in the tourism sector, must carry out digital transformation and have new capabilities, the capability of utilizing digital technology, which is hereinafter referred to as digital capability to be able to survive and win the global competition.

Lew (2008) stated that since the 1980s, special interest tourism with personal experiences had become a phenomenon in the travel and tourism industry. The interest and growth of this market

segment continue to grow, so that niche tourism is referred by Auliana Poon as new tourism in the 1980s and 1990s. According to Longhi & Rocchia (2015), the development of ICTs and the internet caused a second explosion in the growth of niche tourism or niche destinations because it opened the market niche that was initially not economical which increased overall demand, known as the birth of the long tail tourism economy. The internet causes tourists to explore niche products where they can better explore niches, tend to find things they like and can consume a large portion of niche products.

Long-tails were first introduced by Anderson (2004) because the phenomenon of distribution on tourism demand and economic approaches is different from the old path where profitability does not only depend on economies of scale and undifferentiated mass-market exploitation (Lew, 2008). Financial coverage, systems gains, market fragmentation, individualized and customized vacations are increasingly crucial for tourism profitability and competitiveness (Longhi & Rocchia, 2015). Miranda (2012) concluded that the economic model of long tails with the term 'maxi-min' is that the maximum tourists in the minimal destination and accommodation, which are benefits the minimum actors. The distribution results of this model refer to the Pareto distribution law, which is 80% or more of a phenomenon that benefits 20% of actors, for city size, income, and tourism. From a distribution perspective, the world is very rarely seen in normal but fractal or endless distributions. This means that the shipping is formed by many mini-tails, each of which has its own world. In the context of tourism distribution law, overall tourism demand is created on all curves formed by each type of special interest tourism. This applies to all tourism products such as accommodation, attractions and so on (Day et al., 2011; Longhi & Rocchia, 2015). The internet significantly affects the distribution of activities, causing the tail of the distribution curve to be longer and thicker, and further reduce the head area or short head. Therefore Day et al. (2011), underlining the legal strength of the demand curve can be seen as a superposition of all demand curves formed by each destination or accommodation, from the tails within each tail, which then has implications for the higher chance of a niche product. The long tail concept is defined by Lew (2008) as an internet-based marketing approach for small and medium-sized businesses or new destinations to compete in the global market.

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Therefore, the internet causes a fundamental change in the tourism business, where every product has its own market, and even the most remote destinations can access global markets. On the other hand, the development of ICTs also causes tourists to further define products individually and consider the products consumed to reflect their identity. This situation is an opportunity for particular interest tourism destinations to grow and reach markets massively. What is interesting is that tourists are currently incorporated in communities with specific interests, and the business concept is no longer just B2B or B2C but becomes C2C.

As the largest archipelagic country in the world with abundant maritime wealth, this condition is an opportunity for every smallest niche market, especially those included in marine tourism, which began to receive attention and the government's commitment to its development to immediately enter and compete with international markets, especially for small islands and outermost to be able to enter the global market. On the other hand, the internet and digital technology can also integrate scattered tourist destinations so that stakeholders can collaborate to develop tourism products and dispersed markets that are accessible. However, to be able to successfully develop a long tail marketing destination and tourism businesses in destinations must-have digital capabilities. Therefore, based on the above phenomena, this research is intended to see how much digital capacity contributes to long-tail tourism marketing. In order for research to form essential aspects of long tails tourism, the unit of analysis is a seaside destination that is passed by yacht tourists while the observation unit is yacht travellers who travel to marine destinations in Indonesia.

2 LITERATURE REVIEW

2.1 Digital Capability

Digital capability according to Freitas et al. (2016) is the ability to provide information to tourists instantly at the time needed and utilize ICTs and specific technologies such as social media, web-based and mobile technologies, search location and tourist data, and big data analytical skills. Digital capability is

needed to achieve four objectives, namely overcoming market competition, increasing the efficiency of internal communication, structuring business ecosystems, and reducing information complexity and uncertainty (Freitas et al., 2016).

The dimensions of digital capabilities used in this study refer to the capability indicators proposed by Dickinson et al. (2014) and Freitas et al., 2016), the capacity to manage big data, the capacity to do social networking, context awareness capability or proximity sensor capability, internet development capability of things, and the ability to build a tourist experience ecosystem.

Capability to manage big data is the ability to provide digital information when needed (Dickinson et al., 2014; Freitas et al., 2016). Capability to do social networking is the ability to share information with friends or communities that are chosen in specific applications (Dickinson et al., 2014). Context-awareness capability is the ability to inform the proximity of tourists to an object (Dickinson et al., 2014). Capacity to build the internet of things is the ability to integrate and configure internal and external information (Freitas et al., 2016) and the ability to remind consumers in the future/tagging capability (Dickinson et al., 2014), while the capacity of building a multi-channel ecosystem is the ability to creating digital platforms by finding, exploring and applying knowledge about resources, opportunities and exploiting opportunities to improve the efficiency of internal communication and structuring business ecosystems (Freitas et al., 2016). Ecosystem capability can reduce the complexity and uncertainty of information and provide data and news in the right format.

2.2 Long Tail Tourism Marketing

In more than three decades, tourism experts have discussed tourism in the context of globalization, and technological change called the new tourism, which is characterized by the birth of niche market tourism (Lew 2008). Juliana Poon has mentioned the trend since 1998.

The long tail concept refers to the behaviour of the economic sector that provides products in relatively low volumes but is able to generate profits by giving aggregate product variations. The current phenomenon, the total aggregate amount of long-tail products is often higher than the short head or products with large volumes. Usually in short head products contribute to 80% of sales while 80% of long-tail products only affect 20% of total sales.

In a tourism perspective, short head is the main tourist-producing destinations which are usually popular and attract many visitors while the long tail is a destination of particular interest (particular interest tourism destination). The concept of The Long Tail became famous as a way of explaining the structure and success of internet-based activities and representing new approaches to marketing and sales that before the internet was born nonexistent (Anderson, 2004; Brynjolfsson, Smith, & Hu, 2003). The internet provides inexpensive media for individuals and businesses to reach potential audiences and consumers who are not bound by traditional geographic time and location. The internet eliminates traditional factors such as relative distance with raw materials or consumers. This is increasingly felt by specialized services and small market niche products that are in the Long Tail economy.

The indicator of long-tail tourism marketing according to Lew (2008) is the level of differentiation, specialization, personalization of tourist destinations; tourist community, healthy interactions with tourists, and the use of digital marketing.

Differentiation is a differentiating aspect between a product or tourism destination compared to other products and destinations. Specialization is the specific competence of goals and outcomes towards the unique needs of tourists. Personalization is the flexibility of a tourism product or destination serving tourists individually. Digital marketing is the use of digital technology for tourism promotion and marketing activities. Marketing through Social Media is a promotional activity and communication with tourists by using social media. Interaction is building strong relationships with tourists.

2.3 Hypotheses

This section must be in one column.

Implicitly, the research of Sayre et al. (2012) from the Boston Consulting Group, stated the importance of digital capabilities owned by companies to achieve effective digital marketing. Alharbi (2015) says that marketing capabilities can form a marketing strategy, while Banerjee and Soberman (2013) state that product development capabilities affect marketing strategies. Therefore, the research paradigm is illustrated in Figure 1 below.

The research propositions are:

H_1 : Digital Capability affects Long Tail Tourism Marketing

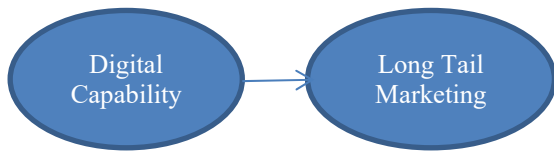H_0: Digital capability does not affect Long Tail Tourism Marketing

Figure 1: Research Paradigm

3 METHODOLOGY

Primary data was obtained by distributing information to yacht tourists who were sailing in Indonesian waters where these tourists enjoy most of the individual interest marine tourism products such as snorkelling, diving, yachting, ecotourism, culture and so on. Questionnaires were measured using an ordinal scale of 5 for excellent ratings and 1 for bad grades.

This research is a quantitative research that uses Structural Equation Modeling (SEM) to generalize data and continue the principal component analysis features and multiple regression (Hanlein & Kaplan, 2004). This method is useful for predicting how the influence of the dependent variable on the independent variable. Data was collected by distributing questionnaires to yacht tourists when they leaned or anchored in Indonesian waters. A total of 134 questionnaires were collected representing 67 yachts participating in the Wonderful Sail to Indonesia. The research was conducted at one time. Respondents were asked for their opinions on six digital capability indicators and six indicators of long-tail tourism marketing with a value of 1 for very poor assessment and 5. The statistical test used in this study was a t-test with an error rate of 0.05 to test how much influence capability digital against long-tail marketing.

4 DISCUSSION

4.1 Model Suitability Testing

The results of data analysis show that the suitability of the overall model is adequate as it indicates the model fit. Chi-Square (145.36) where (P = 0.00), is in the range of right fit. The goodness of fit index (GFI) and normed fit index (NFI) is always between 0 and 1 indicating perfect fit even though values above 0.9 indicate good fit (Bentler and Bonett 1990).

The model has GFI of (0.85) and NFI (0.88), AGFI (00.77) shows marginal fit. RMSEA (0.11) with a 90% degree of confidence for RMSEA (0.092;

0.14), P-Value for Close Fit testing, namely RMSEA <0.05 (0.00). The non-normed fit index (NNFI) and the comparative fit index (CFI) are two additional measurements between 0 and 1, where values approaching or greater than 0.90 shows reasonable model fit (Sim et al. 2006). The NNFI and CFI for the models are 0.90 and 0.92, indicating a good fit. Overall GFI, AGFI, NFI, NNFI and CFI results indicate that the model is fit.

Table 1: Goodness of Fit

The goodness of Fit Index	Model Fit Criteria	Data Analysis Result	Remarks
Chi-Square			
Chi-Square	$\chi 2 < \chi 2$ table	28,96	Good
P-Value	P ≥ 0.05	0,06665	Good
Absolute Fit Measures			
GFI	≥ 0.90	0,94	Good
Normed Chi-Square	< 2 or < 5	1,524	Good
Incremental Fit Indices			
NFI	≥ 0.90	0,88	Marginal
NNFI	≥ 0.90	0,92	Good
CFI	≥ 0.90	0,95	Good
IFI	≥ 0.90	0,95	Good
RFI	≥ 0.90	0,82	Marginal
Parsons Fit Indices			
AGFI	≥ 0.90	0,88	Marginal

Source: Data Analysis Result

4.2 Intra-class Correlation in Variables

The results of data processing show that the highest factor in forming digital capabilities is the tagging capability (ability to remind products and services in the future) which reaches 82%, the ability to manage big data (78%), the ability to develop internet of things (78%), the ability to manage social networks digitally (0.72), develop context awareness or proximity sensors with objects (0.70) and the ability to build digital ecosystems (66%) as listed in Table 2. This means that the capabilities that need to be possessed by the destination and tourism industry in the digital era are the ability to inform products and services in the future (tagging capability), manage big data, develop IoT and manage digital social networks or tourist communities.

The ability to develop context-awareness and build a digital ecosystem is the next priority. The most important factor that forms the long tail tourism marketing variable is product personalization (86%) which indicates the need for a large variety of products according to individual consumer desires, product differentiation (82%) and destination and industry specialities (69%) to serve market niches (individual interest tourists). Surprisingly, the development of social media marketing, digital marketing and intense interaction with tourists only correlated 45%, 22% and 29% respectively. This means the essential thing in long-tail tourism marketing is the uniqueness of its products.

Table 2: Intra-Class Correlation in Variable.

Variable/ Dimension	Items	Intra-class correlation
Digital Capability	Ability to manage Big Data	0,78
	Ability to manage digital social network	0.72
	Ability to develop context awareness	0.70
	Ability to build the Internet of Things (IoT) Tagging Capability	0,78
	Capability to develop a digital ecosystem	0.82 0.66
Long Tail Tourism Marketing	Specialization	0.69
	Differentiation	0.82
	Personalization	0.86
	Digital Marketing	0.42
	Digital Social Network	0.45
	Customer Engagement	0,29

Source: Data Analysis Result

4.3 Hypothesis Testing

Hypothesis test results show that there is a significant effect of digital capabilities on long-tail tourism marketing (test F = 2.48). Research shows that the influence of digital skills on long-tail tourism marketing is 25%. This means that digital skills, especially tagging capabilities, managing big data, developing IoT and awareness context contribute 25% to the success of long-tail tourism marketing, and by 75% are other factors not examined in the research.

This situation indicates that in order for a long tail tourism marketing approach to be effectively applied to niche tourism destinations or marine tourism destinations, tourism destinations need to have digital capabilities, especially the ability to tagging, manage big data, develop IoT and context awareness. Tagging capabilities, leading big data, and context awareness will be more easily achieved if the destination has a digital ecosystem that is able to integrate resources - resources, businesses and scattered maritime business actors. The digital ecosystem platform developed must also be able to accommodate digital social networking to incorporate scattered consumers or tourists. On the other hand, the digital ecosystem platform that was developed needs to adopt the concept of long-tail tourism marketing, namely differentiation, personal service, specialization to capture specific market segments and encourage digital marketing activities.

The birth of long-tail tourism indicates a massive opportunity for particular interest destinations so they can immediately enter the international market without having to build large-scale infrastructure but instead develop facilities and support that are specific to the needs of tourists because the digital ecosystem platform will provide very high for tourists to produce shared experiences that will continue to grow because tourists are increasingly critical and do not want to be dictated by marketers.

5 CONCLUSION

The findings of this study show that destinations and the tourism industry today need to develop digital capabilities, especially the ability to tagging, manage big data, develop IoT, and digital social networking or develop digital communities to build long tail tourism marketing, the marketing strategies to reach market niches. The unique development of product niches namely personalization/ differentiation and specialized individuals is the first step to being able to develop effective new long-tail marketing followed by marketing through social media and close relations with tourists needing to be done next.

It is highly expected that this research can be carried out with more samples and other types of special interest tourism to be able to better explain the phenomenon of long-tail tourism.

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