AN CORRELATION ANALYSIS OF MAJOR INNOVATION FACTORS IN THAI HOTEL INDUSTRY

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Abstract

It has been long significance that tourism is one of the main factors that prospered Thailand's economy. When considering tourism business, hotel businesses are homes to tourists where the pleasure is given. Thailand has been in a good figure in hotel business comparing to the past, and still keep growing continuously. This makes the domestic market become fiercely competitive, not to mention international level. To make distinction from other competitors, hotels must have innovation in every level of the organization. There are factors that influenced innovation in hotel business. The main objectives of this study are to research and investigate those contributing factors in a nationwide scale. The study was conducted on questionnaires where were sent in person, mails, and online. The factors being considered are firm's characteristics, customer driven, management support, human resource management, technological, linkage, AEC, and location. The methodology of this study is first, conducting a survey through questionnaires, and then the responses were analyzed. A total of 1,616 hotels had received this survey and 174 responses were replied back. The response rate was 10.77%. This study also found the positive relationship between innovation and performance. The paper finds seven key elements as an influence factors for promoting hotel's innovation in order to sustain the hotel's competitiveness.

Keywords: Innovation, Hotel Innovation, Innovation performance, Survey

1. INTRODUCTION

The number of travelers has been dramatically increasing. These travelers might come in a way of business agreement, religious oriented or even relaxation. The statistical information can be retrieved from the Gross Domestic Product or GDP and national income from economic activities at current market price. According to the statistics (nesdb.go.th, 2011), it shows that the GDP of hotel businesses is accounting for 4.9% of the overall GDP and the average total income is approximately 300,000 million baht.

In organization, innovation is to improve the performance of productivity and quality. The improvement in the hospitality is one of the examples of innovation in organization. Our strategy analysis includes organizational factors and firm size. Moreover, the effects of uncertainty and market concentration are considered as environmental factors. In the aspect of

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innovation factor, compatibility appropriate to the organization is also analyzed. Our research investigates the factors which effect the innovation and which innovation is important for the hotels.

2. LITERATURE REVIEW

2.1 The define of Innovation

Innovations assist hotel in the way of increasing its performance as it indicates the positive and negative effects of the model (Gopalan and Narayan, 2010; Lee et. al, 2011; Page, 2003). According to Orfila-Sintes and Mattsson (2009) "innovation decisions determinants are the additional services on offer that bookings are made through tour operators. Hotels are part of a hotel chain and the owners of the hotel run the business."

The innovations are the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations.

According to Oslo Manual (OECD, 2005), innovation can be classified into 4 types. Firstly, for product innovation, it is the introduction of a new product, including essential improvements, technical specification, components, materials, and other functional characteristics. Secondly, process innovation. It is the implementation of a new production method or delivery method (mainly focus on processes). Thirdly, for marketing innovation perspective which can be seen as the new way of market the product, also includes new market and mainly focus on latest marketing processes. The last one is organizational innovation. It denotes new organizational method in the firm's business practices, workplace organization or external relations.

The level of innovation can be categorized into 2 types which are radical innovate innovation. Radical innovation brings about a non-routine activities change or major change while incremental innovation is routine activities change or minor change (OECD, 2005; Ottenbacher, 2007; Page, S. J. (2003) .

2.2 The define of Supply Chain Collaboration

The supply chain collaboration of hotel industries can be divided into 2 types (Piboonrungro and Disney., 2009; Zhang et. Al, 2009). First is Horizontal collaboration which refers to the collaboration between firms in the same level of the tourism supply chain. Although firms in the same sector may be recognized as the major business rivals who offer the similar products, they could nevertheless make a collaborative action to increase their bargaining power with their common supplier or obtain benefit from economies of scale. Second are Vertical collaborations in the supply chains. It refers to the collaborations between the firms and their partners that supply them, the inputs (upstream collaboration) or the

partners that they sell their products to (downstream collaboration). Innovation has an important role in supporting supply chain collaboration to increase ability of competitive in term of price and improve the ability to response the process in supply chain. By customer driven the indicator for this factor is to satisfy customer need.

According to statistic in a number of foreign tourists from year 2009 to 2011 (tourism.go.th, 2012), if there are no key factors which create huge impacts to the tourist industry which are flooding and political protesting, tourist rates should be increasing steadily in every year. Here is the figure below which shows the number of foreign tourists in Thailand.

3. METHODOLOGY

The study is conducted through questionnaires that were sent in person, mails, and online. This study following the guideline in the revised OECD 'Oslo Manual' focused on innovation and for service industry in developing, the case of Thailand. Not only technological innovation but market and organization innovation are being taken into consideration. The questionnaire is divided into 4 sections; firm's characteristics, factors promoting firm's innovation capabilities, measurement of innovation performances, and the measurement of the firm's performances from innovation developed.

This study had set up the assumption to believe that there are positive relationships between innovation factors and innovation measurement. There are 6 main factors to be independent variables for this study which are customer driven, management support, human resource, technology, linkage and Website. Customer driven measures the ability of hotel to know and respond to satisfy the customer. Management support measures how management set the policy and culture to support innovation. Human resource measures the involvement of human skill and determination to develop innovation. Technology measure how hotel acquire the new technology both hardware and software to develop innovation. Linkage investigates the relationship and interaction with external parties for innovation sharing. Website measure how website (eg, agoda, hotel.com) forces hotels to innovate. Innovation measurement represented as dependent variables that affected by those 8 factors. Next step is to measure the impacts or outcomes from innovation to the firm's performance with the assumption to believe that there is a positive relationship between innovations and firm performance (Bastakis, et. Al, 2004; Bornhorst, et. Al, 2010; Gopalan and Narayan, 2010; Medina-Munoz and Garcia-Falcon, 2000; Page, 2003; Thomus, et. al, 2011). Therefore, the assumption leads to the following hypothesis;

Hypothesis 1: Customer driven has a positive relationship on innovation development

Hypothesis 2: Management support has a positive relationship on innovation development

Hypothesis 3: Human resource management has a positive relationship on innovation development

Hypothesis 4: Technology has a positive relationship on innovation development

Hypothesis 5: Linkage has a positive relationship on innovation development

Hypothesis 6: AEC has a positive relationship on innovation development

Hypothesis 7: Location has a positive relationship on firm's performance

Hypothesis 8: Website has a positive relationship on firm's performance

Hypothesis 9: Innovation development has a positive relationship on firm's performance

4. DATA COLLECTION AND ANALYSIS

4.1 Data Collection

A total of 1,616 hotels had received by postal mails, online and in person to the hotel industries with 174 returns represent 10.77% in the respond rate. The Table 1 describes the characteristic and information of samples. 38.6% of the samples are chain hotels, 59.6% are independent hotels, and 1.8% are franchise hotels. It is shown that the innovation factors came from independent hotels than chain and franchise hotels. The 79.5% of samples are Thai-own hotels while the rest are foreign-owned hotels. 3-star hotels are counted for 38.6 as the majority of the samples, following by 4-star for 36.9%, 5-star for 18.7%, and 2-star for 5.8%. Size of classification hotels; 32.9% of samples are small size hotel with room available for less than 100 rooms, following by 34.7% for medium size hotel that have 100 to 300 rooms; large size hotels with room available 301-600 rooms counted for 31.2%; and very large size hotels with rooms available more than 600 rooms counted for 1.2%. Number of employees classification of hotels; hotels that have less than 100 employees are counted for 36%, hotels that have more than 100 but less than 300 employees is counted 32.5%, more than 300 but less than 600 are counted for 29%, more than 600 employees are counted for 2.4%.

According to Table 1, it is shown the mean and standard deviation of all interested factors. The factors that influenced the innovation include customer driven, management support, human resource, technology, linkage, AEC, location, and website. The majority of the samples find the Location as the most influencial factors to develop innovation at the average score of 3.97 followed by Customer driven at the average score of 3.9. The samples also suggest that Competitor and Human Resources are also important which a little lower average score of 3.85 and 3.64 respectively. The technology factor has the average score of 3.62.Management Support has the average score of 3.55. The AEC fator has the average score of 3.54. The linkage has lowest average score of 3.09.

Table 1: The Factors influencing Innovation on descriptive statistics

Factors	Mean	S.D.
Customer driven	**3.9**	**0.86**
Management support	3.55	0.84
Human resource	3.64	0.9
Technology	3.62	0.8
Linkage	3.09	0.86
AEC	3.54	0.89
Location	3.97	0.86
Website	3.85	0.86

Table 2 shows the mean and standard deviation for innovation type, it can be summarize that the markting innovation is the major type in which hotel focus on and it has the score of 3.58 while service innovation has 3.36, organizational innovation has 3.39 and process innovation has 3.23. The marketing and organization innovation has the highest score since hotel industries mainly focus to implementation a new marketing method and new organizational structure.

Table 2: The type of Innovations on descriptive statistics

Innovation	Mean	S.D.
Service Innovation	3.36	0.99
Process Innovation	3.23	0.89
Organization Innovation	3.39	0.88
Marketing Innovation	**3.58**	**0.95**

4.2 Data Analysis

Most of researchers use correlations to summarize the association between two scale variables. The correlation between two variables reflects the degree to which the variables are related (Chand and Katou, 2012; Zeng, et. Al, 2010). Generally, when discussing on correlations, it refers to Pearson's correlation coefficient. This value measure the strength of the linear relationship between variables. The correlation value coefficient can have values from -1 to +1. A correlation of 0 indicates that there is no linear relationship between the two variables. Correlations of -1 and +1 indicate that there is a perfect linear relationship in negative or positive direction, respectively.

Table 3: The correlation between each factors and its effected on Innovation.

Factors	Innovation
Customer driven	
Pearson Correlation	0.703
Sig.	0.00
Management support	
Pearson Correlation	0.734
Sig.	0.00
Human resource	
Pearson Correlation	0.769
Sig.	0.00
Technology	
Pearson Correlation	0.645
Sig.	0.00
Linkage	
Pearson Correlation	0.605
Sig.	0.00
AEC	
Pearson Correlation	0.348
Sig.	0.00
Location	
Pearson Correlation	0.293
Sig.	0.00
Website	
Pearson Correlation	0.443
Sig.	0.00

This study performs correlation analysis in order to test research hypothesis. If the hypotheses are correct, we should expect to find a positive correlation between factors and innovation.

From Table 3, it is shown the correlation result, which displays correlations among every factors specified and innovation. The last column shows the relationship between factors and innovation; which are customer, management support, human resource, technology, linkage, AEC, location, and website. There are all positive correlation between factors and innovation with the difference strength. Another value to confirm the linear relationship is the value of sig. 0.000 or 0.001 which are statistically significant relationship.

The results show the strongest positive relationship between innovation and human resource management with coefficient 0.769, followed by 0.734 for management support, 0.703 for customer driven, 0.645 for technology, 0.645 for linkage, 0.443 for website, 0.348 for AEC, and 0.293 for location. In conclusion, the following Hypothesis 1 to Hypothesis 8 were supported.

The next step is to perform correlation analysis between innovation and performance. The following Table. 4 shows the Pearson Correlation of 0.770. Thus, the "Hypothesis 9: Innovation development has a positive impact on firm's performance" is also supported.

Table 4: The correlation analysis between Innovation and its effected on Performance.

Innovation	Performance
Pearson Correlation	0.770
Sig**.**	0.00

5. CONCLUSION

The researchers have discussed innovation in service including characteristics and factors of innovation in the hotel industry located nationwide. However, this study found that the hotel business is a people-oriented business. The most significant factor that plays important role in the quality of the service industry is human resource. The data suggested that in order to achieve innovative services, the hotels must conduct some training activities that relate with innovation. The better organization structure can be developed through management by issuing policies that encourage innovation, for example innovation based on the acquisition or purchase new technology and the collaboration with suppliers. The hotel's performance can be expected to improve by implementation of technology. Especially the market-related aspects such as market attractiveness, market responsiveness, and marketing strategies are also critical aspects for innovation. In addition, linkages are also needed because the important of knowledge flows among firms and diffusion of innovation. In conclusion, the most significant factor that makes firms most successful is innovation. The important resource for implementing novel knowledge to enhance organization's ability is to develop innovative products as well as create new valuable services and competitiveness in an organization.

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