

# An Evaluation E-Commerce Performance in Hotel Businesses Using Balanced Scorecard

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**Abstract:** In the modern business world, the IT advances accelerate the world's commercial development with the help of Internet technology in supporting variety of activities. As a result, e-commerce play a significant role in almost every industry. Hotel industry is one of those which are fully beneficial from the e-commerce, which fulfills the customer's needs. This research is conducted to study the character of the hotel e-commerce and the measurement of performance of the hotel e-commerce in Thailand in all perspectives of Balanced Scorecard.

In the research, the researcher uses the reasoning approach to describe the relationship between the variables of causes and effects whose directions are precisely specified. The samples of the research are the hotels in the Bangkok metropolitans and vicinity areas. The researcher uses questionnaires to measure the customer satisfaction of business operations according to the Balanced Scorecard. Then, the initial collective information is analyzed to categorize those samples in percentage. Next, the result of the satisfaction based on Balanced Scorecard measurement is tested for the relationship of all variables by using the statistic of interrelation and chi-square values.

The result of the research provides us the character of operating of the hotel industries and the sufficiency of operating e-commerce of hotel industries in Thailand. In addition, it can be used as a guideline in hotel business development which enhances the capabilities of performance and competition.

**Keywords:** e-Commerce, Performance, Balanced Scorecard.

## I. Introduction

Tourism industry can make incomes to many countries and

enormously pull foreign currencies into the country. Consequently, tourism market has speedily grown. World Tourism Organization estimates that in the year 2020 over 1.5 billion tourists would take international journeys. Europe would still be the most popular tourist place. Second to Europe, Asia Pacific would welcome up to 397 million tourists. The growth rate is average as 6.5% per year [1].

Tourism industry shows a satisfactory growth rate. Anyway, what follows is a highly competitive situation. As known, tourism can bring foreign currencies to the nation's economy at a quite fast time so many developing countries have turned to give an importance to tourism by emphasizing on tourism development as the initial issue in the National Social and Development Plan. Developed countries have also developed their tourism. In the Asian Pacific region, Thailand is one of the tourist destinations due to the natural uniqueness and prominence. Market share of tourism in Thailand is expected to be growing up. In 2020, there would be around 37 million tourists, or 63% increase, to visit Thailand. To respond to such situation, we should develop our tourism industry in all perspectives in order to be internationally competitive.

Currently, hotel business introduces e-commerce to various kinds of work such as internet booking, self-plan tour, hotel information providing in terms of location, type, room price and facilitations, e-mail correspondence, raw material purchase to supplies via internet and online payment. All these facilitate more effective operation. Nevertheless, the business has not evaluated the application of e-commerce to business. So, to be the approach for the evaluation, the objectives of this research are to study the feature of e-commerce in hotel business in Thailand and to develop the effectiveness indicator of e-commerce as to the principle of balanced scorecard. Indicators will be considered from work systems of hotel in four perspectives: financial, customer, organization internal, knowledge and development and will be set up from factors internally and

externally affected. It would be quite beneficial to introduce balanced scorecard to hotel business for performance evaluation and more effective development and improvement of operation.

## II. Related Research

### II.1 E-Commerce Principle

E-Commerce means any economic activities between at least two persons or businesses conducted on electronic network such as booking, purchasing, negotiating, bidding, paying, advertising, service providing and transactions in other forms, which may occur within a company such as designing, product manufacturing, coordinating, payment transaction. This can be conducted by business to business, business to customer, customer to customer or business to government sector or other kinds, which may late define by the development of e-commerce [2].

From the research of Somnuek Kirito and Phumsak Smutkhup conducted a study on the approach of the development of e-commerce indicator progress in Thailand [4]. From the research, it was found that firstly, the definition and concept of e-commerce should be clear for simple understanding and good survey. If there was no standard definition, the survey would lack reliability and accuracy and would not bring the result to compare in the international level.

E-Commerce Division [2] conducted a study on the evaluation of e-commerce in Thailand as to the principle of Balanced Scorecard such as. The samplings were the entrepreneurs who registered their websites with the Ministry of Commerce. There are 4 main perspectives of Balanced scorecard 1.customer, 2. knowledge and development, 3. internal process and 4. financial were referred for the analysis. Moreover, other perspectives as marketing and information technology and e-commerce were evaluated. From the study, it was found that, in financial perspective, most companies started the business from their own capital so they were small and bore no many expenses. This was good to e-commerce. However, the disadvantage was they were not much considered. For customer perspective, the business gave an importance to customer service by creating relationship and good impression to customers. What was found was that the increasing numbers of customer was rather low. For internal process perspective, most businesses tried to introduce e-commerce and technology to improve the quality of service. For the knowledge and development perspective, most business had growth potential because the entrepreneurs and executives had good education and moderately understand e-commerce features but lacked e-commerce marketing training to their staff and lacked marketing survey so the long-term problem would be faced because of no suitable product development for the market.

### II.2 Balanced Scorecard Concept

Balanced Scorecard has been generated by Professor Robert Kaplan and Dr. David Norton who conducted a study on the cause of the US stock market difficulties. This was due to the most use of financial indicator so they thought of other 4 perspectives to evaluate an organization, namely, financial perspective which reflected the financial performance, customer perspective which reflected customer satisfaction, internal process perspective which was the improvement of internal process to respond to financial purpose, knowledge and development perspective which reflected the satisfaction of staff and how to maintain staff with the organization [6].

Wim Van Grambergen and Isabell Amelinckx [7] conducted a research on "Measuring and managing e-business projects through the Balanced Scorecard". They studied the e-business management evaluation by balanced scorecard and found that for the investment in former e-business, ROI, NPV, IRR, PB were considered and these were only the financial result because the executives saw that decision making on investment had to rely on financial perspective. This overlooked other relevant points. BSC helped the executives to consider other perspectives because BSC allowed periodic monitoring and report to the executives so that they could know BSC problem and could adjust to more effective indicators.

### II.3 E-Commerce in Hotel Business

The past adjustment of hotel to technology still relied on wholesale partner. Anyway, when internet played an important role, new customer group occurs. Each hotel advertisement was rather troublesome and spent many budgets. After internet introduction, hotel can create their website, design and input details with tiny expenses and is available for new-generation tourists from all over the world, who enjoy searching details and new lodgment from websites.

Sansakon Phikunkheha [3] conducted a feasibility study on e-commerce investment in hotel operation: case study: Chiang Mai Orchid Hotel on 4 perspectives: techniques introduction of e-commerce to hotel operation technology could highly facilitate the hotel operation, marketing the higher the competitive situation was, the higher the customer's bargain power would be, management the information providing in e-commerce in hotel business was not high but the reservation and payment through internet system was rather risky. Hotel should have readiness of specialists, financial – NPV should be at 2.6 years and IRR should equal to 64.97%. From this, it is possible to introduce e-commerce into hotel business.

## III. Research Methodology

In the research, the researcher uses the causal research to describe the relationship between the variables of causes and effects whose directions are precisely specified. The samples of the research are the hotels in The Bangkok metropolitans and vicinity areas which standardized by Hotel Standard and Tourism Authority of Thailand and Association of Thai

Travel Agents. The researcher collects information by tool such as questionnaires. The first questionnaire asks the questionnaire of his or her profile to analyze his or her qualification by the measurement of mean and percentage. The second part asks the opinions of the four parts according to the Balance Scorecard to analyze the satisfaction using the statistics of Correlation Coefficient and Chi Square. This tests the relationship between the variables of causes and effects. And the third one is to investigate suggestions after applying business into e-commerce.

#### IV. Preliminary Results

The study shows that some groups of hotels industries understand that the e-commerce are e-mail, online reservation, and Web sites. Here are some examples of statistics. 18.2% of them purchases goods and services via Web sites, 12.7% use internet banking, 10.6% pays bills through Web sites and takes distance learning, and 8.5% experiences online auction respectively 5.2%.

In terms of monetary measurement, the study finds that the average monetary efficiency as a whole is in a higher position after adopting e-commerce. It increases the revenue from foreign customers and sales also crease during the promotion. After adopting the e-commerce, hotels also gain better images. customers recognize their images, services, and activities. Hotels that accept e-commerce gain more new customers each year.

In terms of interior operation measurement, the research finds that the interior operation efficiency average is in a better position after adopting the e-commerce because it accelerates communications with customers. This enables a better customer service and better reservation management during the high season. It also provides a sufficient communication with customers due to a more sufficient planning.

In terms of learning and growing, the study finds that learning and growing is in a medium level. After adopting e-commerce, hotels are ready for TI since they invest more in technology and employees learn more about their organization and have a better view of the organization. Hotels of e-commerce also provide computers as tools which enhance the employees' skills.

In conclusion, according to the four perspectives of Balanced Scorecard, the operation is involved with e-commerce efficiency.

#### V. Conclusion

To use e-commerce in business sufficiently, hotels should measure the operation after adopting the e-commerce from time to time to observe the business growth. This will make it clear that e-commerce investment is beneficial to their business. Research shows that e-commerce improves the

operation and enable the business to grow. For a better result, organizations should train employees about the new technology so they can get the best out of it. In addition, the government should improve the law about the e-commerce to ensure the credibility among the service providers and customers of their Web sites since the confidence of e-commerce in Thailand remains unreliable. This is one of the significant steps for hotel industries whose growing customers are mostly foreigners.

#### References

- [1] Electronic Commerce Resource Center (2000). "Electronic Commerce for Thai Tourism Industry". Bangkok,2000
- [2] E-Commerce Division (2004) "Conducted a Study on The Evaluation of e-Commerce in Thailand as to The Principle of Balanced Scorecard". Bangkok: E-Commerce Division. Department of Business Development. Ministry of Commerce Thailand.
- [3] Sansakon Phikunkheha (2001). "Conducted a Feasibility Study on e-Commerce Investment in Hotel operation: Case study Chiang Mai Orchid Hotel". Ciang Mai University, 2001
- [4] Somnuek Kirito and Phumsak Smutkhup (2002). Conducted a Study on the approach of the Development of e-Commerce Indicator progress in Thailand. Kasetsart University.
- [5] Balanced Scorecard Collaborative, Inc. (1999). Balanced Scorecard. Balanced Scorecard Collaborative [online]. Available <http://www.bsc.com>
- [6] Kaplan, R.S. and Norton. D.P. (1996). The Balanced Scorecard. Harvard Business School Press: Massachusetts.
- [7] Wim Van Grembergen and Isabelle Amelinckx. (2000). "Measuring and Managing E-business projects through the Balanced Scorecard", University of Antwerp (UFSIA).
- [8] United Nations Conference on Trade and Development (UNCTAD), E-Commerce and Development Report 2001, United Nations, 2001.
- [9] Thai Hotel Association (2004). Thailand Standard Hotels (4<sup>th</sup>ed.) Bangkok: Graphic Line.
- [10] The Information for Development Program, E-Readiness as a Tool for ICT Development, November 2001.
- [11] OECD (2002), The Working Party on Indicators for the Information Society (WPIIS): Progress Report and Ideas for Future Work, DSTI/ICCP/ IIS (2002)9, May 2002.
- [12] New Zealand Institute for the Study of Competition and Regulation Inc., "Scoping Study: E-Commerce Performance Measurement Research for New Zealand", August 2001.
- [13] United Nations Conference on Trade and Development (UNCTAD), "Information and Communication Technology Development Indices", United Nations New York and Geneva, 2003.
- [14] Michel Hébert (2001). "Measuring The Facts and Effects of E-commerce" 6<sup>th</sup> Annual Seminar of INSEE's Business Statistics Directorate.
- [15] Amanda Rowlatt, "Measuring E-commerce: Development in The United Kingdom", Economic Trends, No. 575, October 2001.
- [16] Kaplan, R. and Norton, D., "The Balanced Scorecard measures that drive performance", Harvard Business Review, January-February 1992, pp. 71-79
- [17] Kaplan, R. and Norton, D., "Using The Balanced Scorecard as a Strategic Management System", Harvard Business Review, January – February 1996a, pp. 75-85
- [18] Niven, Paul R. (2002). Balanced Scorecard Step by Step: Maximizing Performance. New York: John Wiley & Sons.
- [19] Efraim Turban (2002). Electronic Commerce A Managerial Perspective 2002. Prentice Hall.
- [20] Kalakota, R. and M. Robinson, E-Business: Roadmap for Success, Addison Wesley, Berkeley, CA, 1999