

**THE IMPACTS OF NETWORKING AND ICT USAGE ON PERFORMANCE  
OF TOURISM ENTERPRISES: CASE STUDY BATAM CITY, INDONESIA**

**KAMARUZAMAN**

A thesis submitted in fulfillment of the requirements for the awards of the degree of  
Master of Management (Technology)

Faculty of Management and Human Resource Development  
UNIVERSITI TEKNOLOGI MALAYSIA

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*To my beloved parents H. Salawat and  
Rohana, and my beloved family*

## ACKNOWLEDGEMENT

Praise to ALLAH *Subhanahuwata'ala*, has given me mercy to finish study master. Many thanks to Walikota and Batam Government have sponsored me study master in UTM Malaysia. To my parents, I am proud to be your son. The sincere appreciation to my supervisor, DR. Kamariah Ismail, thanks you so much for your guidance. Then to all people that have supported me physically, materially and morally. Just ALLAH can respond with kindness for you all.

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This thesis is far from perfection. Advance suggestions and opinions from readers are expected in order to improve it. Thank you very much.

## ABSTRACT

The purpose of this study is to investigate the impacts of networking and ICT usage on performance of enterprises in Batam, Indonesia. A quantitative research approach via survey on 123 enterprises in tourism sector in Batam was conducted through the use of structured questionnaires. The theoretical framework was used to determine the relationships of each of independent variables (networking and ICT usage) to each of dependent variables (subjective performance, income and number of workers). The results of *multiple regressions* analysis indicated that simultaneously networking and ICT usage significantly predicted on performance. The best factor predicted subjective performance was both networking and ICT usage. Meanwhile, the best factor predicted income and number of workers was ICT usage. Research only focused on Batam tourism enterprises. Performance measurement concerned only on networking and ICT usage.

*Keywords: networking, ICT usage, business performance, tourism, Batam-Indonesia.*

## ABSTARK

Tujuan kajian ini adalah untuk menyelidiki pengaruh-pengaruh daripada jaringan dan penggunaan teknologi informasi dan komunikasi pada prestasi syarikat pelancongan di Batam, Indonesia. Satu pendekatan penyelidikan kuantitatif melalui penelitian terhadap 123 syarikat pada sector pelancongan di Batam sudah dijalankan dengan menggunakan soal selidik terstruktur. Kerangka teori telah ditunjukkan untuk menentukan hubungan diantara setiap pemboleh ubah tidak bersandar (yaitu jaringan dan penggunaan ICT) terhadap pemboleh ubah bersandar (yaitu prestasi subjektif, pendapatan dan jumlah pekerja). Keputusan analisis kajian regresi berganda menentukan bahawa secara serentak jaringan dan juga penggunaan ICT secara signifikan telah meramalkan prestasi-prestasi syarikat. Faktor terbaik yang telah meramalkan prestasi subjektif adalah kedua-duanya, iaitu jaringan dan juga ICT. Sementara itu, faktor terbaik yang telah meramalkan pendapatan dan jumlah pekerja adalah penggunaan ICT sahaja. Penyelidikan ini hanya bertumpu pada syarikat-syarikat pelancongan di Batam sahaja. Pengukuran prestasi hanya berkonsentrasi pada jaringan dan penggunaan ICT sahaja.

*Keywords: jaringan, penggunaan ICT, prestasi syarikat, pelancongan, Batam-Indonesia.*

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## **CHAPTER 1**

### **INTRODUCTION**

This chapter explains the background of the study, problem statement, research questions and research objectives. The significance of study is also explained in this chapter.

#### **1.1 Background of study**

Tourism industry play increasingly significant role in many countries national economy (Zhang *et al.*, 2000). In Indonesia, foreign exchange from tourism sector was estimated to be US\$4,797.88 million in 2004 and it increased to be US\$7,377.39 million in 2008. It means that tourism sector plays important role for economy in Indonesia. The existence of emerging of tourism enterprises has opened job opportunities for people as well as accelerating the modernization of the country.

According to Ardiwidjaja (2005), Indonesia is an archipelago country. It is a country with many islands with a tropical climate and high humidity. Indonesia has a wide diversity of natural resources such as mountains, forests, beaches and wildlife. This is a specific attraction of Indonesia compared to other countries. Visitors visiting Indonesia can see many kinds of attraction including cultural and social legacies. Besides they also can observe the histories of Indonesia and know how Islam, Buddhism, Hinduism, and Christianity contribute to Indonesian cultural heritages.

Batam is a part of the Riau Archipelago Province. Disparbud (2010) reported that Batam is the one of biggest three contributors of International tourist visitation in Indonesia after Bali and Jakarta. It is the outermost island of Indonesia which borders Singapore and Malaysia. Kam and Kee (2009) stated that Batam is a part of growth triangle such as Singapore, Malaysia and Batam. The strategic location makes this city become a potential place for visited by international tourists. Since many years ago, Batam has been given by Central Government a special autonomy as industrial development area. Therefore, Batam has been becoming MICE (*meeting, intensive, conference and exhibition*) destinations in Indonesia (Disparbud, 2010). In addition the natural beauty is also interesting and rich culture as well as art resources liked by people. In fact, it has become Batam often visited many foreigners and local visitors.

Figure 1: Batam Map



Source: [www.google.com](http://www.google.com)

Nashiri (2005) stated that past few years, many tourism businesses have been built since Batam was settled as the third entrance of tourism in Indonesia. Entrepreneurs turn to take this opportunity to do business which providing services for tourists become to Batam. There are several kinds of tourism services in Batam such as tourism travel agencies, hospitality, sports tourism, marine tourism, natural tourism and others. Most of tourism enterprises in Batam are small-scale enterprises. Small business resources might be very limited. Normally, a small business only provides one service, the others businesses provide other different services. According to Disparbud (2010), their locations are spread in urban and rural areas in Batam. The urban tourism enterprises offer some kind of public services such as shopping centre, food centre, hotel and other. Meanwhile, Tourism enterprise in rural are such as beach, small islands and forests offer services such as resort, villas, scenery, and outbound.

Tabel 1: International Tourists visited Batam 2001-2009.

<b>Year</b>	<b>Number (Person)</b>
<b>2001</b>	1.145.578
<b>2002</b>	1.101.048
<b>2003</b>	1.277.098
<b>2004</b>	1.527.131
<b>2005</b>	1.024.733
<b>2006</b>	1.012.711
<b>2007</b>	1.077.306
<b>2008</b>	1.061.390
<b>2009</b>	1,020,140

Source: Directorate General of Immigration of Batam, Indonesia (2010)

Table 1 shows that foreign tourists visiting Batam increased from 2001 to 2004. This is caused by the factors that has mentioned above. However, it went down in 2005 and 2006, because of global crisis. Then it increased in 2007 and decreased again in 2008 and 2009 because it's global crisis.

According to Smeral (1998), the issue of global crisis has implied to tourism industries in over the world. Several actions have been done by tourism industries to restore the impact of global crisis being normal. They changed the patterns of tourism from traditional to the post modern by using technology in order to survive and compete with tourism global players. In addition, they also developed network alliances to develop tourism destination of tourism and fulfill customer needs.



In Batam, tourism is very potential sector that can giving incomes for government and jobs opportunity for people. The issues as impact of decreasing the number of visitors have to be overcome to keep the tourism sector existing and developing. Players of tourism such as government, industries and community are responsible to overcome the problem. Based on the background of study above, then this study focuses on issues of tourism enterprises for improving performance of tourism enterprises. According to Lerner and Haber (2000), improving performance of the tourism enterprises could be done through possible various approaches. Success of tourism enterprises is caused by several factors. There are two factors of this study, that are, business networking and ICT (information and communication technology) usage which affect on performance of tourism enterprises.

According to Berzina and Berzin (2005) in their study in Latvia-Italy, small tourism industries competed to the rivals with each business. They spent high budgets and reduced the price to win the competition. However, those did not bring the better performance to the business. Otherwise, it brought business to the level of high competition accompanying high cost and price war among them. Later, they realized that for sustainability of tourism needed collaborating among tourism SMEs by building cooperation and networking.

As a service provider, the existence of tourism enterprises very depends on visitors. It means that higher visitors the higher benefits are received by enterprises. Therefore, they have to do continuously marketing effort in order to attract customers' visitation. However, O'Donnell (2004) stated that small tourism enterprises generally had less good marketing system rather than large-scale industry. For instance, the owners involved in the marketing effort and assisted by family members and staffs. But, this form of marketing is not good enough for achieving competitive advantage. They should build the networking with external business to get company goal.

A study in Italy, it discussed about network approach used to measure the networking of tourism enterprises and its impact to performance (Denicolai *et al*, 2010). It stated that networking dimensions included trust, formal relationship, sharing of knowledge and degree of integration. Those dimensions were analyzed its relationship to the business performance. It found that three elements of networking had significant relationship to performance. Those are formal agreements, knowledge sharing and trust.

There is another effort could be developed for tourism business that is information and communication technology (ICT) usage. According to Ma *et al*. (2003), in China, ICT is perceived to be able to help tourism business gaining competitive advantage. However, result shows that there were not many benefits of ICT to tourism businesses in China because there was lack of trust between customers to the ICT suppliers. Traditional of business and consumption culture also make people keep away to use technology. In UK, ICT usage has significantly influenced towards tourism industries (Martin, 2004). This was emphasized that trust of customers to the tourism company was high. Both studies show that the importance of trust development in term of using ICT in tourism enterprises.

The study of ICT in tourism enterprises is very interested to be conducted. It will involve various dimensions that could be investigated in term of ICT approach. For example, Aldebert *et al*. (2010) introduced e-tourism as a new way for doing tourism trading. ICTs bring various benefits to business such as help tourism businesses doing promotion, transaction, communication and so forth (Ma *et al*, 2003). Levels of technology usage of tourism industries are different depend on size of business. Big size industry will apply high technology in their business activity to improve performance.

The performance of tourism business generally reflects the size of the business. Performance measurement can help businesses to design and determine the

strategic and tactical actions (Lerner and Haber, 2000; and Michopoulou and Buhalis, 2008). The most common dimensions of performance used are the enterprise's income and the number of employees. Besides, that there are also some kinds of performance that will be measured subjectively which based on entrepreneur expression on business performance such as development and growth, business strength, customer satisfaction, and so forth.

Improvement of business performance could be done through creation and development of programs in a creative, innovative and supportive ways. One of ways is increasing the use of information and communications technology. Even though, increasing the use of ICT is essentially unable to provide values added to business directly. However, ICT empowers business to create a strategy and efficient in implementation (Michopoulou and Buhalis, 2008). Buhalis (1998) stated that entrepreneurs of tourism industry should aware that importance of adopting ICTs in the business.

## 1.2 Problem Statement

Many tourism businesses emerged when Batam was decided by the Central Government as the gate of international tourists. The government considered that Batam has great potential to develop tourism sector because of its strategic location and the resources. Batam is one of three cities in Indonesia contributing biggest International tourist arrival in Indonesia. However, from data of Batam immigration show trend of foreign tourists' arrivals in Batam prone to decrease especially in 2005 to 2009 (see table 1). Issues such as global crisis, service quality, network development, ICT usage, and others would be causes of the decreasing number. Some researches and practitioners identified the larger impacts of global crisis to the many sector include tourism sector (Smeral, 1998).

However in this study, researcher only focus on issues of networking and ICT usage; and its impacts on performance of tourism industries in Batam rather than others issues. There are some reasons: First, researcher wanted to be concerned on specific scope of study on networking and ICT usage only. Second, these issues are interesting to be investigated because nowadays, these issues have been playing important role in developing tourism sector in Batam. The other reasons are related to the role of networking and ICT usage itself. In the world of business, the networking and ICT usage has been able to improve business performance and competitiveness in the era of globalization. Tourism networking helps entrepreneurs from the disadvantages of facing competition and changes it become an opportunity by building cooperation. Networking also overcomes the limitations of members in accessing of market information. In other side, ICT usage is improved by tourism enterprises in order to be ready facing the need for rapid communication and availability of data for decision-making processes and process of complex transactions. It requires from simply displaying company info (web presence) to more complicated transactions (such as e-commerce and e-business).

Performance variables include subjective performance, generating income, and number of employees (Reichel and Haber, 2005; Lerner and Haber, 2000; and Nyabakk and Hansen, 2008). It has been stated that this research focused on the business networking and ICT usage as independent variables. Investigation was done in term of these factors affect on the performance of tourism enterprises in Batam.

The tourism businesses in Batam have been applying the integral concept of networking cooperation. This could be seen from the many existing networks currently in Batam, such as cooperation of restaurants and hotels, travel agencies and hotels, association among entertainment services and many others. The relationships were expected to be able assist tourism businesses improve its performance. They decided to choose for building a business network with various colleagues. But before build networking, they learn first which one is appropriate to be joined with their enterprise (O'Donnel, 2004). Entrepreneurs perceive that networking as effective medium to get information. Therefore, the effects of networking on performance of tourism enterprises in Batam are interesting to be investigated.

Another variable was explored through observing its impact to tourism enterprises performance is ICT usage. Adopting ICT into business is perceived to be able giving benefit to business. Many tourism entrepreneurs use ICT to assist creating a business strategy and efficient business implementation (Ma, *et al.*, 2005). The uses of ICT include sharing information; business promotion and marketing; and communication with the stakeholders and customers. The ICT usage could reduce the cost of business because the applications of ICT are simple and easy to use. ICT allows businesses to communicate and convey information to prospective buyers. It is also enables business to achieve distance transmission of information and creating a wider network. Refers to the statement above, it provokes us to view whether ICT lead to improve the tourism business performance or they have no influences on it. This needs to be investigated.

Investigating the effect of networking and ICT usage in performance of tourism enterprises will begin with identifying the concepts of those variables, its dimensions, and its relationship through study literatures. Next process is formulating the methodology of research that wants to be used. Moreover, it was conducted actual research, data collection. Analysis data was the next step to investigate level and effects of networking and ICT usage on performance. Then, findings of analysis data were discussed. Afterward, some conclusion is made and recommendation was developed based on findings.

Base on problem statement above researcher would like to conduct a research titled *“The impacts of networking and ICT usage on performance of tourism enterprises: Case study in Batam City, Indonesia”*.

### **1.3 Research Questions**

Based on the problem statement discussed earlier, this study will answer the research questions as below.

- (i) What are the categories of networking among tourism enterprises and which ICT are used by tourism enterprises in Batam?
  
- (ii) What are the impacts of networking activities and the usage of ICT on performance of tourism enterprises in Batam?

### **1.4 Objective of Research**

The study has some significant objectives in order to answer the research questions as mentioned before. They are:

- (i) To identify what are the networking activities and ICT usage in tourism enterprises in Batam.
  
- (ii) To investigate the relationship of networking activities and ICT usage on performances of tourism enterprises in Batam.

## 1.5 Significance of Research

This research is necessary for several reasons, as follows.

- (i) This study provides information and enhances the study on topic of tourism enterprises especially in networking activities, ICT usage and business performance.
- (ii) The result of study can be used to support the future research. For academicians who want to study on the topic related could use the information from this study as a reference.
- (iii) Evaluation for tourism businesses in Batam in term of networking activities, ICT usage and its impacts on business performance. This study provides suggestion and recommendation in developing performance for the tourism enterprises in Batam based on finding.
- (iv) This research is a kind of activities of student to manifest theoretical knowledge to the applied research. The purpose is to solve the problem of study through doing the real research in the area of study.



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*Keywords: jaringan, penggunaan ICT, prestasi syarikat, pelancongan, Batam-Indonesia.*