E-COMMERCE: A TOOL TO ENHANCE SMALL MEDIUM TOURISM ENTERPRISES

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Abstract—Tourism is a highly competitive industry and one of the fastest growing industries in the world. Developing countries have diverse reasons to use tourism as a strategy towards development. Developing countries have been using tourism to generate highly sought after foreign exchange to handle the problems of trade imbalance many of them are facing. Other reasons are to achieve international status, which symbolizes the country’s ability to stand on the global stage, using tourism as a mechanism to co-integrate and unify countries that have multi-ethnic population and used as a platform where public money is invested in attempt to enhance the socio-economic wellbeing of deprived local population. The ICTs revolution also has a significant impact to the world tourism industry. However, this Internet revolution is viewed as a double-edged sword for entrepreneurs and small business owners. Through the effective use of e-commerce, small and medium tourism Enterprises can access new markets and serve new customer. Yet, it will thrust them into a whole new marketplace, where they will experience increased competition from other business and well-established giant that come from well outside of their normal market reach. Therefore, small and medium tourism enterprises (SMTEs) have to adopt innovative and informed e-marketing strategies to be distinct and profitable. In the last three decades, Yogyakarta has grown rapidly as a tourist centre and becoming the third most visited destination by international travellers in Indonesia (after Jakarta and Bali). One potential tourist attraction in Yogyakarta is the region Giriloyo Hamlet, Village Wukirsari, Imogiri, Bantul regency, Yogyakarta (DIY). The potential products of Wukirsari village are the tomb or graves of the kings of Mataram as a tourist destination, batik as a souvenir, learning batik as a study tour project, and also its traditional foods and drink. However, information about Wukirsari village and its attraction is not yet disseminate regularly by Internet, although there are several static website that gives information about Wukirsari and offering no e-commerce facilities. Wukirsari itself already have websites that was established by the help of university student that were doing their field project. However, those websites are not well maintained and not up-to-date. These problems arise because they don’t have the skilled human resource for maintaining the website after the student finished their field project. In addition, there are limited telecommunication and internet connection network (infrastructure) in Wukirsari. Policy makers and the SMTEs should work together to increase awareness of e-commerce through training and education for stakeholders, employees and consumers. E-commerce cannot be implemented without empowering and enabling tourism stakeholders to take advantage of new Internet and e-commerce technologies. Especially the case of Wukirsari, it has big opportunities to market itself, both as tourist destination place and its batik through internet. Therefore the partnership between the academics, the community and the policy maker is crucial.

Keywords—e-commerce, portal, internet, Small Medium Tourism Entreprise, Tourism, Giriloyo Wukirsari, Yogyakarta

I. INTRODUCTION

Tourism is a highly competitive industry and one of the fastest growing industries in the world. Many countries either developed or developing countries have various reasons for using tourism, ranging from economic to the political. For example, developed countries have been using tourism mainly to overcome problems with regards to issues in employment as a result of de-industrialization. Meanwhile, developing countries have diverse reasons to use tourism as a strategy towards development. Furthermore, developing countries have been using tourism to generate highly sought after foreign exchange to handle the problems of trade imbalance many of them are facing. Other reasons are to achieve international status, which symbolizes the country’s ability to stand on the global stage, using tourism as a mechanism to co-integrate and unify countries that have multi-ethnic population and used as a platform where public money is invested in attempt to enhance the socio-economic wellbeing of deprived local population (Aziz et.al, 2012, pp.167-168). Another key issue in tourism industry is that in many countries, small and medium tourism enterprises (SMTEs) make up the majority of the tourism industry and therefore make a substantial contribution to regional economies (Braun, nd).

The tourism sector in Indonesia has been gradually rising and has emerged as an enormous branch of industry. In 2011, the tourism revenue in Indonesia reach approximately US$ 8.4 billion annual foreign exchange earnings. Furthermore, it provides for more than 11 million people in Indonesia and direct and indirect employment opportunities and also contributed nearly five per cent (4.95%) to Indonesia’s GDP in 2011. Since 2002, the foreign arrival has increase up to 60% (Mutis & Arafah, 2012, p.656). Moreover, in 2011 – 2012, the growth of the tourism sector is 5.2% (Van Der Schaar, 2013) and in the first 5 months of the year, from January through May 2013, in this global economic uncertainties, the international tourist arrivals to Indonesia rose by 5.79% (Indonesia Travel, 2013).
The Information and Communication Technologies (ICTs) revolution, especially the access to and use of the Internet have affected the way many companies do business. Developing countries are also adopting ICTs as a pathway to economic development, although the widespread adoption and use of ICTs has been slow. This slow adoption of ICTs is especially true amongst small and medium business, which plays a major economic role in developing countries. However, small and medium enterprises (SMEs) in developing countries are held up by the underlying environmental limitations that characterize these countries; such as the inadequate and unreliable infrastructure, high cost of ICTs, and unstable political environment (Karanasios, 2008, p.12).

The ICTs revolution also has a significant impact to the world tourism industry. The world tourism industry in the past 30 years has been influenced by three major waves of information and communication technologies (ICT): the Computer Reservation System (CRS) in the 70s, the Global Distribution System (GDS) in the ‘80s and the Internet from the mid-90s onwards. The ICTs are becoming important businesses and communication tools. Current development in telecommunications, networking databases, data processing and electronic marketing gives tourism many new opportunities and considerably changing the traditional tourism business models. The use of ICTs adds value to tourism services and products and supports the development of industry networks and clusters (Islam, 2012, p.167). Despite well-published dot com failures, many businesses learned through adopting ICTs, especially e-business or e-commerce, they can afford access to a full range of market opportunities that are no longer constrained by geographic location, create specialized businesses and improve the quality and speed of processes (Williams & Warden 2003). Moreover, E-business or e-commerce are able to change the whole tourism value chain for example information on destination, accommodation, transportation, package tours and services) and effect process management and service delivery in the global tourism sector (Islam, 2012, p.167).

However, this Internet revolution is viewed as a double-edged sword for entrepreneurs and small business owners. Through the effective use of e-commerce, small and medium tourism enterprises can access new markets and serve new customer. Yet, it will thrust them into a whole new marketplace, where they will experience increased competition from other business and well-established giant that come from well outside of their normal market reach. Therefore, small and medium tourism enterprises (SMTEs) have to adopt innovative and informed e-marketing strategies to be distinct and profitable (Markley, Barkley & Lamie 2007).

II. E-COMMERCE AND SMALL AND MEDIUM TOURISM ENTERPRISES (SMTEs)

Electronic Commerce or e-commerce is an emerging concept that describes the process of buying and selling or exchanging of products, services, and information via computer networks including the Internet. Or in other words, e-commerce refers to a wide range of online business activities for products and services. A complete definition is: “E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals” (Andam, 2003, p.6)

There are studies that identified a number of benefits that have been linked with SMTEs Internet use in developing countries. One study by Purcell et al (2004 cited in Karanasios 2007) identified the benefits, that is reduced advertising and communication costs, more efficient access to information and wider audience. This findings suggests that SMTEs that do not adopt the internet are putting themselves at a significant disadvantage. Moreover, this study suggest that in order to adopt Internet (e-commerce), SMTEs have to identify strategies that can assist them to overcome the barriers. Meanwhile OECD (2000, cited in Kim, 2004, p.1) indicated that the initiative of Internet-based electronic commerce offers extensive opportunities for firms to expand their customer base, enter new product markets and rationalize their business. WTO (2001, cited in Kim, 2004, p.1) also point out that electronic business offers SMEs the opportunity to undertake their business in new and more cost-effective ways. Thus, the Internet-based electronic commerce can provide the small and medium tourism enterprises (SMTEs) the potential to make information and booking facilities available to tourists at relatively low costs and provide a tool for communication between tourism suppliers, intermediaries, and also end-consumers (Kim, 2004, p.1).

Small and medium tourism enterprises (SMTEs) should take advantage of the benefits of the ICTs in particular e-commerce such as the information flow and access to new markets. Consistent with WTO (Kim, 2004, p.1), the Internet is revolutionising the distribution of tourism information and sales. The number of Internet users who are buying on-line are increasing and tourism will gain a larger and larger share of the online commerce market (Kim, 2004, p.1). The key element in the tourism industry is Information. In general, tourist would like to know beforehand about the attractions and the facilities of a particular destination. Moreover, they also want to know other information that is related to their visit in order to make their trip safe, secured and enjoyable. As consumers, in this case tourists become more knowledgeable about the Internet, their expectation increased in terms of viewing and purchasing tourism and travel products online (Wynne, Berthon, Pitt, Ewing, & Napoli, 2001 cited in Braun, nd). Currently, ICT literate consumers look forward to find information, book and purchase local and regional travel, tours.
and accommodation through the Internet. Therefore, it is very important to disseminate the information on travel and tourism-related products and services. This can be done by adopting ICTs since the most important benefit associated with ICTs is the supply of information. Evidently, the Internet is having a major impact as a source of information for tourism (Islam, 2012, p.167; Kim, 2004, p.1). As a result, tourism firms of all sizes possibly will need to expand their traditional marketing channels such as brochures, billboards and stands at trade shows and their conventional tourism product distribution channels such as the use of travel agents, destination marketing organizations and travel wholesalers, to include the Internet for business-to-consumer (B2C) interaction (Buhalis & Main, 1998 cited in Braun, nd). In addition, ICTs can create trust between tourists and entrepreneurs (small and medium tourism Enterprises), developing e-commerce capacity, marketing and promoting the authorities to be the marketplace for tourism. Consequently, the role of ICT in tourism industry cannot be underestimated and it is a crucial driving force in the current information driven society (Islam, 2012, p.167).

In information technology, the study of e-commerce in the tourism industry has emerged as a ‘frontier area’. However, there are few study and information available about tourism especially that are related to e-business in Indonesia, although static web sites do exist and offering no e-commerce facilities. Nevertheless, Karanasios (2008, p.12) indicated that small and medium enterprises (SMEs) in developing countries are held up by the underlying environmental limitations that characterize these countries; such as the inadequate and unreliable infrastructure, high cost of ICTs, and unstable political environment.

Kim (2004, p.2) mention that the adoption of Information and Communication Technologies (ICTs) is only part of the story. SMEs are facing more rigorous barriers to the adoption of new information technology, in particular, e-commerce (Kim, 2004, p.2; Braun, nd.). One of the problems relates to the scale and affordability of information technology and the facility of implementation within rapidly growing and changing organizations. Big challenges that are faced by smaller companies consist of network access costs, dissemination of information on electronic commerce, training, skill development and human resources. Additionally, new solutions configured for large, stable, and internationally-oriented firms do not fit well for small, dynamic, and locally-based tourism firms (Kim, 2004, pp.1-2). Issues of trust and confidence are also difficult to address which makes SMEs more at risk to problems linked to authentication/certification, data security and confidentiality and the settling of commercial disputes than large firms (Buhalis & Schertler, 1999; OECD, 1999 cited in Kim, 2004, p.2).

Other studies in European on the uptake of technology by tourism SMEs further indicate that due to their size, SMEs often lack the time, skills, financial resources and manpower needed to implement ICT and compete with their larger counterparts (Buhalis & Main, 1998 cited in Braun, nd). This is because SMEs tend to be preoccupied with the operational running of their business. Consequently, they fail to focus on marketing planning and online business transaction and approach their market less formally and more intuitively from direct contact with their guests (Main, 2002 cited in Braun, nd). Given that the owners of SMEs are often dependent on external ICT expertise, they are afraid to lose control and therefore they resist changing (Anckar & Walden, 2001). Their resistance to change tend to be higher if the SMEs location is in peripheral regions where the ICT infrastructure, especially broadband, can still be inadequate or prohibitively expensive due to limited demand (Braun, nd.).

Usually, smaller tourism operator have lagged behind their larger competitors in term of technology adoption, but the Internet has been described as empowering even tiny tourism enterprises (Buhalis, 1999, cited in Karanasios 2007, p.22). APEC indicated in their Study of SME Electronic Commerce that —Small and medium enterprises are significant players in business-to-business electronic commerce, which constitutes more than 80 percent of all e-commerce activities. SMEs that can demonstrate their capabilities to use e-commerce will have a competitive advantage in the e-commerce marketplace" (cited in Kim, 2004, p.2).

**E-COMMERCE ADOPTION MODEL**

Braun (nd) stated that many many regional tourism SMEs have already started to consider adopting networked infrastructures and strategic alliances with the intention to offset possible loss of competitive advantage in the networked economy. Levy and Powell (2003) suggest a type of Internet development that are possible to follow by SMEs is an Internet Model where website evolution is reflective of business growth, that is if the business grows the website also increases in functionality.

Rao, Metts and Monge (2003 cited in Davidson & Burgess 2006) suggest a staged model which reflect e-commerce development by SME:

1. **Presence:**
   
   This is the stage where most companies make their first steps in e-commerce or involved in a digital environment. They are adopting e-commerce by displaying their company brochure and product offer on a website (Timmers, 2000 cited in Rao, Metts and Monge, 2003). At this stage the Web site provides information and primarily one-way communication to any potential user. Furthermore it is best represented by a company having a Web site that provides information about the company's products and services, contact information, and other relevant information in a static manner. There is also no integration with internal and/or external processes, and the presence is primarily used to attract new customers (O'Connor and O'Keefe, 1997 cited in Rao, Metts and Monge, 2003).
2. Portals

This stage is viewed as the introduction of two-way communication, customer or supplier ordering, order placement, the use of profiles and cookies. In this setup, SMEs are enabled to communicate two-way between the business and customers (B2C) and/or between businesses (B2B). The information provided in the presence stage can be added with facilities for ordering, product feedback, and product and/or quality surveys. Beside attracting new customers, this stage also allows the company to engage and retain visitors, and relate them to their individual preferences for customization purposes (Le and Koh, 2001 cited in Rao, Metts and Monge, 2003). This stage also able to link information displayed with inventory data, and search capabilities for the users (Timmers, 1999 cited in Rao, Metts and Monge, 2003). However, although there is two-way communication at this stage, it is not possible to process financial transactions. Although technology and e-commerce awareness increases it can be anticipated that a given company may enter a later stage, leapfrogging earlier stages in order to accelerate its development process. When a company does this, it is anticipated that all previous stage issues must be addressed” (Rao, Metts and Monge, 2003).

Braun (nd), in his study also stated several studies related to this issue. One survey study that was conducted among small tourism firms in England indicated that respondents from both the macro (destination) level and the individual SME level could see the potential benefits of using web technologies for joint marketing and securing new business collaborative purposes (Main, 1999 cited in Braun, nd). Another British study similarly revealed that development of a shared destination website proved to be attractive to local tourism operators (Evans et al., 2001 cited in Braun, nd). In fact, currently can be found examples of destination network formation in tourism regions across the globe (Pavlovich, 2003; Ryhänen, 2003, cited in Braun, nd).

Furthermore, Braun (nd) stated that many opportunities exist to encourage new ethos of connectivity between tourism SMEs by using networking. However, such a a collaborative or network culture is not present as a matter of course in every region. A systemically embedded culture of competition and autonomy might prevent network building from happening (Buhalis & Cooper, 1998 cited in Braun, nd).

There are many researches that highlighted varying degrees of reluctance by SMEs within the tourism sector in terms of joining a network (Braun, 2004; Evans, 1999, cited in Braun, nd). For that reason, network formation may need to be promoted, especially in regions where tourism SMEs are not naturally prone to collaboration or may be geographically dispersed. There are methods to help establish interfirm relationship building by informal processes such as attending seminars, local or regional tourism association meetings and participating in online chats with other firm managers (Braun, 2004 cited in Braun nd).

Braun (nd) also mention that as soon as SMEs are approachable to transform their local and regional relationships within online environments such as web portals then an incremental and more formal levels of virtual collaboration may be introduced. To attract SMEs to participate in in new communication channels such as a web Portal, the network has to be appealing for the SMEs. If the stakeholders do not see the value proposition, so only providing a portal platform with e-business capability will mean little. Therefore, successful network adoption for SMEs requires both training and thorough strategic planning. The benefits for participating SMEs such as saving time and resources, enhanced market visibility and strategic regional leverage should have clearly defined. Accordingly, the structure of the destination network and the manner wherein the linkages between tourism SMEs are formed and maintained are critical (Pavlovich, 2003 cited in Braun, nd).

3. Transaction Integration

In this stage, financial transactions can be done. Interactions can be for selling as well as buying Thus will require higher technical capabilities, and IT infrastructure and, thus, SMEs will face new challenges to overcome. This stage can include the participation in virtual communities, that allow participants to share information around an area of common interest (Timmers, 2000 cited in Rao, Metts and Monge, 2003); electronic auctions, where sellers offer products or services to buyers through a Web site with a structured process for price setting and order fulfillment, third party e-marketplaces, where a third party provider places the catalogues of suppliers online, and offers catalogue search, ordering and payment facilities in a secure environment to purchasers. In this stage, integration is viewed as the integration of internal processes, which allows for the optimization of all the operations of the organization. In addition, the level of collaboration and sharing of information between partners is considered to be low (Rao, Metts and Monge, 2003).

4. Enterprise Integration

This stage is where the SMEs have complete integration of business processes to the level that offline business is indistinguishable from online business and usually requires high level of collaboration between business partners.
Another issue is training. It is important to have an understanding of the real and perceived barriers and challenges to online adoption that are seen by the eyes of individual SMTEs owner-operators (Morrison & King, 2002, cited in Braun, nd). The representation of ICT jargon, cutting connectivity cost, gaining online visibility, and gaining trust in and perceiving value in new technology tools give initial value for SMTEs. Besides creating e-business awareness among individual SMEs, capacity building for will also help to reduce isolation and maintain core market reach in a rapidly changing economy. Training can also generate support towards destination/regional partnership building by making e-markets more accessible. It is also suggested that destinations which has an integrate ICT-based networking and cooperative marketing strategies to create SMTEs networks of scale can further reduce SMTEs isolation, bring SMTEs and cyber customers together and increase the willingness of cyber customers to purchase tourism product from smaller suppliers (Braun, nd). Furthermore, by developing skills through building new partnerships between SMTEs and regional e-business experts, issues such as regional product development and global customer reach may be addressed (Braun, nd).

III. CASE STUDY: GIRILOYO – WUKIRSARI VILLAGE, IMOGIRI, YOGYAKARTA

In the last three decades, Yogyakarta has grown rapidly as a tourist centre and becoming the third most visited destination by international travellers in Indonesia (after Jakarta and Bali). The average stay in the city is short – less than two days – a large part of which is spent in the temple complexes of Borobudur and Prambanan which both UNESCO world heritage sites (Shah & Gupta 2000, p.14). One potential tourist attraction in Yogyakarta is the region Giriloyo Hamlet, Village Wukirsari, Imogiri, Bantul regency, Yogyakarta (DIY). Giriloyo is a hamlet in the village area Wukirsari, Imogiri, Bantul regency, Yogyakarta, which lies about 17 kilometers south of Yogyakarta. Giriloyo or Wukirsari is known for the tombs or graves of the kings of Mataram which are located on a hilltop Imogiri and also its batik productions. The village is now known as Wukirsari is a combination of small villages, namely Giriloyo, Pucung, Singsosaren and Kedungbuweng. The community each has its own activity, especially Giriloyo, Pucung, and Singsosaren, so these villages became known for the expertise of its people. In this case Giriloyo famous for batik, Pucung famous leather and woven bamboo, and Singsosaren famous tiled. Moreover, the village offers to the tourists to explore the area to see the natural sights and activities of the batik crafters. In addition, participants can enjoy the cruise village of traditional foods, namely pecel turi flowers and "wedang uwuh". Giriloyo produced batik crafters in the village have high artistic value that can be implemented in the daily life of the community. These values include the sanctity, beauty (art), persistence, meticulousness and patience. The value of sacredness is reflected in certain patterns may only be used by families Ngayogyakarta Hadiningrat Palace (Batik 2010).

The potential products of Wukirsari village are the tomb or graves of the kings of Mataram as a tourist destination, batik as a souvenir, learning batik as a study tour project, and also its traditional foods and drink. However, information about Wukirsari village and its attraction is not yet disseminate regularly by Internet, although there are several static website that gives information about Wukirsari and offering no e-commerce facilities. From the interview with Nur Ahmadi, the chairman of Circle of Friends Batik Tulis Giriloyo Imogiri, Wukirsari itself already have websites that was established by the help of university student that were doing their field project. However, those websites are not well maintained and not up-to-date. These problems arise because they don't have the skilled human resource for maintaining the website after the student finished their field project. In addition, there are limited telecommunication and internet connection network (infrastructure) in Wukirsari. Their website include in the first stage of e-commerce development model of Rao, Metts and Monge (2003), that is Presence. They are only displaying brochure about their village and products offer on a Web site. Their website only provides information and primarily one-way communication to any potential user. However, Nur Ahmadi said that their community is willing to learn and adopt e-commerce as long as the infrastructure, human resources and policy support the adoption.

Community service in Giriloyo Wukirsari need to be established. The main goal of the community service is to establish a portal for the batik crafters to market and sell their products, especially batik through website (online). The results is an established portal at www.batiktuliswukirsari.com. As stated before, Wukirsari itself already have websites that was established by the help of university student that were doing their field project. However, those websites are not well maintained and not up-to-date. If not addressed accordingly, the community service will face the same problem that is village don't have the skilled human resource for maintaining the website. There is a big possibility that the youth in Wukirsari are technology literate, however until today there are no one who are technology literate enough to pass on the maintenance of the portal. Maybe in the future in depth training will be needed in effort to socialize the program in order to attract young people in Wukirsari to become the administrator of the portal. Another same obstacle is the limited telecommunication and internet connection network (infrastructure) in Wukirsari.

In the beginning of the project, roughly around May 2013, the team already search for an active website of Wukirsari and the websites that have been found was not active and mainly just in blog format. However, in November 2013, beside our website, there is one website that also established. This is an opportunity of the team to contact the website manager and work together to find the candidate for the portal administrator. As recently in early 2016 there are more websites that was established but only hands full that are
active in regards to actual commerce through the website. More of the SME’s choose to put their product in an established e-commerce portal such as www.tokobagus.com, www.olx.com and other online shop portals.

IV. CONCLUSION

There are many studies that indicate the benefits and barriers for SMEs in adopting e-commerce for their businesses. Understanding the potential of the Internet will SMTEs the opportunity to adopt new marketing and e-commerce models and become part of the global economy. However, many SMTEs in the regional destination level still have not understand in greater detail the value and opportunities of ICT and e-commerce, as well as the wider market options in terms of local-global relationships. Therefore, in order to help the SMTEs to enter the e-commerce marketplace, it is crucial for government and other private sector to assist and support the development and adoption of e-commerce. For example, building ICT’s infrastructure, improving the ICTs skill of SMTEs human resources by conducting training and even providing access to funds to establish e-commerce website. These supports can be done by collaborating and partnership between governments, private sectors as well academics, and SMTEs. Most research recommended that government plays an important role in facilitating the use of electronic commerce for the tourism industry and in increasing their ability to gain the benefits, for example through awareness building and training programs.

With the partnership with private sector, it is essential for Government to establish a more comprehensive and consistent policy approach to the tourism industry and electronic commerce, and applies evaluation mechanisms to assess what works and does not work (Kim, 2004, p.2). Furthermore, both the policy makers and the SMTEs should work together to increase awareness of e-commerce through training and education for stakeholders, employees and consumers. E-commerce cannot be implemented without empowering and enabling tourism stakeholders to take advantage of new Internet and e-commerce technologies. Especially the case of Wukirsari, it has big opportunities to market itself, both as tourist destination place and its batik through internet. Therefore the partnership between the academics, the community and the policy maker is crucial.

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