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Adoption of E-Commerce for Small and Medium Enterprises: Empirical Study in Indonesia

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Abstract:

Each company must have the competitiveness to support its marketing performance. E-Commerce applications offer an effective alternative marketing system with a relatively low cost. However, the rate of adoption of information technology by small and medium enterprises (SMEs) are still limited. Madura batik craftsmen as one of the potential industry in Indonesia has been struggling to market their products in the global market. In an effort to help expand the reach of marketing for SMEs in the global market, it requires a strategy to accelerate the ability of SMEs to adopt E-Commerce.

This study used a qualitative approach. Methods of data collection was conducted using in-depth interviews and focus group discussions. The results showed that the adoption of information technology, especially the E-Commerce for the Madura batik craftsmen still relatively low. In general, Madura batik craftsmen have a good perception of the benefits of E-Commerce, however, they considered the technology of E-Commerce is relatively difficult to implement in support of batik marketing. The main reason that drives the batik craftsmen to adopt E-Commerce are the benefits of E-Commerce to increase competitiveness, enhance marketing performance as well as the encouragement of external factors. On the other hand, an inhibiting factor for SMEs to adopt information technology are cost constraints, human resources and information technology complexity. In addition, the protection of the design motif is also a major obstacle that makes the craftsmen less interested in implementing E-Commerce. There are four factors that determines the adoption of information technology for batik craftsmen, i.e. individual characteristics, technological characteristics, the context of the company and the environmental context.

Keywords: Strategy, Adoption, E-Commerce, Madura Batik

1. Introduction

Small and Medium Enterprises (SMEs) are considered as the backbone of the economy that has played an important role in the economy of many countries. SMEs contribute to economic growth, the value of exports to create jobs and increase income for most people. SMEs play a role as a driver of the economy and innovation. Furthermore, SMEs also provide social objectives in a fair distribution of income. (Kumar and Sardad: 2011; Cosgun and Dogerlioglu: 2012; Ongori and Migiro; 2010).

The establishment of SMEs is not only due to its flexibility, it can also adapt quickly to market demand and supply situation, continues to change, to help diversify economic activities, and make a significant contribution to exports and trade (Gharakhani and Mousakhani: 2012) even in times of crisis (Cosgun and Dogerlioglu: 2012). The ability to survive and bounce back is because SMEs have advantages such as cost of labor is relatively cheap (Kumar and Sardad: 2011) and mostly using local raw materials that do not depend on imported raw materials.

In an environment of global economic system is currently very strategic export activities to the national economy. Export expansion is one of the main determinants of economic growth. This reflects the view that a policy oriented ekspori help to stimulate economic growth. Export expansion can be a catalyst for the growth of national output either directly, as a component of aggregate output, or indirectly through the efficient allocation of resources, greater capacity utilization, exploitation of economies of scale, and the stimulation of technological improvements due to competition overseas markets. (Sahni and Atri: 2012).

Of the total export value of Indonesia abroad, the main export commodities derived from non-oil exports, which the non-oil sector contributed 79.62% while oil and gas sector accounted for 20.38%. Of the non-oil sector, the largest contribution given by industry sub-sector amounting to 60.04%. That is, the non-oil sector, especially industry sub-sector has a dominant role on the export performance in Indonesia. (Central Bureau of Statistics: 2013)

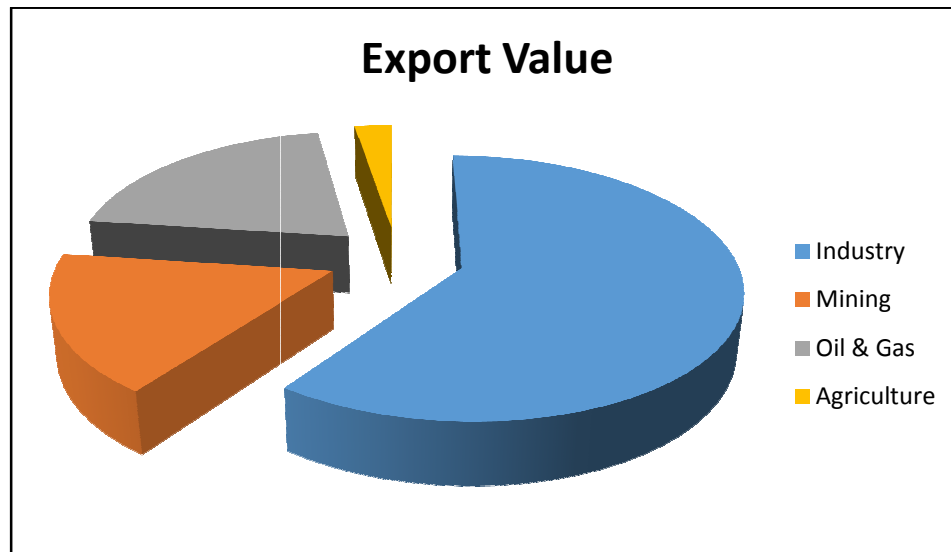


Figure 1: The structure of Indonesian Export Value by Sector
Source: Indonesian Central Bureau of Statistics (2013)

The value of non-oil exports was contributed by the industrial sector comes from some categories of companies, ie exports carried out by micro-enterprises, small businesses, medium businesses and large enterprises. In this case the researchers stratified into two categories, the first group Small and medium-sized businesses, the second category of large businesses. The contribution of SMEs to the overall value of non-oil exports in Indonesia is relatively low. It is not comparable to the contribution of SMEs to GDP is relatively greater than the value contributed by Big Business.

That condition cannot be separated from some of the constraints faced by SMEs to export activities. The important role of SMEs in supporting the national economy should be accompanied by awareness to strengthen SMEs to improve competitiveness through increased productivity and efficiency. SMEs face various challenges. To face this challenge, it is suggested some solutions, among others, the adoption of information technology, increased efficiency and competitiveness (Ongori and Migirow (2010).

Many reasons that encourage SMEs to make the adoption of the E-Commerce to support its business activities. E-commerce can improve business opportunities, competitiveness, and market access better and profitable. When companies consider e-commerce as a means to expand their markets, reduce costs and so on, they are more likely to adopt E-Commerce. (Bahaddad, Al-Ghamdi and Houghton: 2012). This is because E-commerce allows organizations to access potential customers and suppliers via the web. In addition, E-Commerce offers: market expansion, increased productivity, customization of products and services, 24-hour trading and the exchange of knowledge. (Alamro and Tarawneh: 2011).

With the argument that the micro small and medium enterprises is the fulcrum of a dynamic economy (resources), then the increasing development of information and communication technology (ICT) has provided a suitable platform to improve organizational performance. Through the development of information and communication technologies in business and trade, the performance of the organization will have increased unprecedented. Improved organizational performance is clear can be assessed both in the field of finance. marketing and operational. Further disclosed that till today still very few studies that examine the overall effectiveness and impact of E-Commerce to organizational performance in the sphere of small and medium-sized businesses worldwide. (Jahanshahi, et al: 2012) SMEs are required to make changes to improve the competitiveness of enterprises. The competitiveness of a company is the ability to maintain its market position by supplying products in a timely manner and at a price that is in the field of marketing, with e-marketing, prospective customers can be predicted and contacts with customers and sales efforts across the region can be easily done (Hong, 2002).

One of the keys to improving competitiveness is driving the pace of innovation of a company mellalui adoption of information technology in order to compete, both at the local, national, and global environment. Previous research showed that the adoption of information technology by SMEs is still low compared to large companies. Lack pemahaman strategic role played by information technology associated with a new marketing approach, dealing with the consumer, or even the development of products and services is suspected as the cause of the low adoption of information technology by SMEs (Wahid and Iswari, 2007)

Madura batik handicraft sector as one of the SMEs in the textile industry is one of the industry people are very potential to be developed. However, the marketing of Madura batik is still very limited. Based on the above phenomenon, in order to minimize the risk of failure in the application of information technology, the necessary research to generate models of the adoption of information technology, especially e-commerce applications to improve marketing performance Madura batik craftsmen.

2. Literature Review

2.1. Micro, Small and Medium Enterprises

According to the Law of the Republic of Indonesia Number 20 of 2008 on Micro, Small and Medium Enterprises, the criteria for Micro, Small and Medium Enterprises are as follows:

- a. Criteria of Micro Enterprises are as follow:
 - i. Have a net worth of at most Rp50,000,000.00 (fifty million rupiah) not including land and buildings ; or
 - ii. Have annual sales of at most Rp300,000,000.00 (three hundred million rupiah) .
- b. Criteria of Small Enterprises are as follow:
 - i. Have a net worth of more than Rp50,000,000.00 (fifty million) up to at most 500,000,000.00 (five hundred million rupiah) not including land and buildings, or
 - ii. Has annual sales of more than Rp300,000,000.00 (three hundred million rupiah) up to at most Rp2.500.000.000,00 (two billion five hundred million rupiah) .
- c. Criteria of Medium Enterprises are as follow:
 - i. Have a net worth of more than Rp 500,000,000.00 (five hundred million rupiah) up to at most Rp10,000,000,000.00 (ten billion rupiah) not including land and buildings ; or
 - ii. as annual sales of more than Rp2.500.000.000,00 (two billion five hundred million rupiah) up to at most Rp. 50.000.000.000,00 (fifty billion rupiah)

2.2.E-Commerce

One of the major obstacles encountered in the literature E-Commerce is a way of defining the concept of vagueness. Many researchers are wrong to use the concept of E-Marketing, Internet-Marketing, E-Commerce and E-Business as the same concept, or menggunakan two of these concepts until same purpose. For which the use is of course not true. E-Marketing has a broader scope than the Internet-Marketing. Similarly, E-Commerce and E-Business has a broader scope than the E-Marketing Meanwhile other authors argue that the development of technology and technology applications very fast for business accompanied by a variety of new terminology. The use of the term 'electronic commerce' has been equipped with additional terms such as e-business, e-marketing, e-CRM, e-Procurement. We no longer need to question the terminology; more importantly, to offer benefits to customers and businesses that can be obtained through e-business. (Chaffey: 2009).

There is ongoing debate among consultants and academics about the meaning and limits of two terms E-Commerce and E-Business. Some argue that the E-Commerce includes the overall activities of electronic-based organization that supports the exchange of enterprise market, including all the relative information infrastructure. On the other hand, some argue that the E-Business covers all internal and external activities based electronics, including E-Business. It is important to make a distinction between the operational concept of E-Commerce and E-Business, because it refers to different phenomena. E-Commerce, especially involving transactions across corporate boundaries, while the E-Business mainly involves the application of digital technologies for business processes in the company (Laudon and Traver: 2013: 11)

Based on some view of the above, it can be said that there are three opinions about the relationship between E -Commerce with eBusiness. The first view, assume that the E -Commerce together with the E -Business. The second view states that E - Commerce is part of E -Business. The third view states that E- Commerce is not identical to the E -Business, but between the two intersect. As revealed by El - Sofany et.al (2012) that both E - Commerce E -Business mauppun based on electronic data processing data transmission.

Comparison of various definitions of the concept of E - Commerce is taken from several definitions that have been proposed by experts and authors in the field of E - Commerce below.

- a. According to Ramanathan et al (2012), in the early 1990s at the commencement of development of E - Commerce, E - Commerce is defined simply as transactions conducted via the Internet . But after a few years later, E -Commerce interpreted as an organization that includes a variety of activities, including sales, purchasing, logistics and / or other management activities - organization via the web or aktivitas fulfilling their business through information networks . Further specifics they give the interpretation of the E - Commerce includes the use of electronic technology for sales / advertising using the internet in the context of B2C B2Bdan to improve internal functions (such as processing or order fulfillment), and to support communication between partners raantai supply.
- b. E - commerce refers to a variety of commercial online activities focused on commodity exchanges by electronic means, the Internet in particular, by companies, factories, industrial and consumer (El - Sofany et . al . : 2012)
- c. E - Commerce is viewed as a whole didimediasi exchange of information electronically between an organization and its external stakeholders or third parties relating to the organization (Chaffey : 2009 : 11)
- d. E-commerce is the use of the Internet and the Web for business transactions, more formally, E-Commerce is a commercial transaction between the organization and between organizations and individuals organized digitally. (Laudon and Traver, 2013: 10)

E-Commerce is a commercial activity which includes the communication of information, payment management, negotiation and trading of financial instruments, and transportation management. E-commerce is sharing business information, exchange of goods and services, payments, creating and maintaining business relationships and conduct business transactions via telecommunications networks. E-commerce is defined as doing one or more core business functions internally within the organization and externally with

suppliers, intermediaries, consumers, governments, and other members of the corporate environment through the use of internet-based computer networks and others. (Addo: 2012).

2.3. Driver and Inhibitor of Information Technology Utilization

There are several things that encourage companies to adopt a technology. As stated by Nguyen (2008) that for many companies, the most common reason for the adoption of IT is to provide a means for maintaining survival and / or increase growth, improve competitiveness. SME IT adoption for different reasons, because of different corporate functions and their surroundings do not always operate in the same way or have the same impact. Some argue that the move to adopt Information Technology is a response or reaction to an event while others suggest that changes the result of pressure from customers and an increasing emphasis.

Reason SMEs are not using information technology according to Wahid and Iswari (2007) because it does not yet prove the benefits of information technology. This is consistent with Diffusion of Innovations theory which states that the compatibility of IT to the needs of SMEs be one of the determinants of adoption. Another reason raised with regard to cost constraints and human resource capacity needs attention. In this context, complexity proved even become one of the obstacles of IT adoption by SMEs in Indonesia. Although the price is getting cheaper and affordable IT, but for the majority of SMEs, it is still an expensive item. This perception is very likely related to return on investment is less promising.

3. Research Methods

This study used a qualitative approach. The research location is determined in three cities, namely, Bangkalan, Pamekasan and Sumenep. The choice of location of this study was based on the consideration that a third of the city is the center of the craft of batik with batik Madura characteristic that up to the present is still in operation. The unit of analysis in this study is the batik craftsmen at craft centers in batik, Bangkalan, Pamekasan and Sumenep which has characteristics as small or medium business.

Selection data source is directed to the informant (source data) are deemed to have important data relating to the cases studied. Reasons for the selection of samples subjectively because it is seen as more capable of capturing the completeness and depth of data in a single do not understand reality. The selected research informants are expected to give the maximum opportunity in the ability of researchers to construct a theory that is formed on the field by taking into account local conditions such as the specificity of the circumstances (idiographic). Intake of informants of this study is not intended to generalize to the population but to acquire the depth study in a particular context. The informants were chosen not represent the population but represent the information, so that when generalizations tend to do so at her as a generalization theory.

Methods of data collection will be done in this study are as follows:

- a. In-depth interviews are conducted in order to obtain a full and complete picture of the perception of craftsmen to use e - commerce to improve marketing performance.
- b. Focus Group Discussions are used with due consideration to the intensity of the problem and its prospective new will be found accurately if the informant involved cognitively and emotionally in a forum or a chance directed. This technique is used to obtain data about the views, perceptions and attitudes towards the benefits, the difficulty in applying information technology, especially e - commerce applications This discussion is done by the craftsmen, employees and academics.

The data obtained will be processed in order to be presented in a form that is easier to read and interpret. Processing of data for this study using qualitative analysis techniques

4. Result and Discussion

In-depth interviews carried out on the Batik Madura good craftsmen who have a micro, small or medium in the three districts. In Bangkalan district, interviews were conducted with the craftsmen in Madura batik craft centers in Tanjung Bumi. While in the district Pamekasan depth interviews conducted for craftsmen Batik Madura handmade batik handicraft centers in Proppo. Meanwhile, in-depth interviews in Sumenep made to craftsmen in batik craft centers in West Kandangan.

In order to deepen the understanding of the phenomenon under study as well as to supplement the information deemed to be lacking at the time of the in-depth interviews conducted using the advanced data collection methods Focus group discussions (Focus Group Discussion). Discussions focused kelompok held in Madura batik handicraft centers in Pamekasan district. The location was selected taking into account that among the three regions that became the object of research, in the center of batik craft Propo is the only center of batik which has a non-formal organization in business management this batik, namely the Society of batik craftsmen Propo. Focus groups conducted for community members and administrators Madura batik craftsmen in Propo Pamekasan involving the craftsmen, marketing managers and employees at the Madura batik craft center.

4.1. Craftsmen's perception of E Commerce

Based on the results of in-depth interviews were conducted to craftsmen, managers and employees of business batik Write Madura in three districts it can be generally stated several reasons that can encourage business managers to adopt information technology in the operation of the business. A major incentive for managers of small businesses to adopt information technology among other benefits of the application of information technology for the company's internal and external factors that encourage the use of information technology.

Application of information technology in particular E Commerce in a usasha unit can provide benefits in improving the competitiveness of enterprises. Thus increasing the competitiveness of companies is one of the reasons that may encourage the use of information technology for micro and small businesses.

The results of in-depth interviews indicate that the batik craftsmen generally aware that the use of information technology in particular E Commerce can help increase the competitiveness of enterprises. Increased competitiveness, especially in terms of help expand market opportunities, improve quality of service to customers, improve response to customer demand sertapadamembangu ultimately increase market share which manifested itself in an increase in sales volume. According to the craftsmen's presence information technology can help provide an opportunity for the company to expand its market share, which is where this will be the factors that are necessary to improve the competitiveness of enterprises.

One of the main reasons for the company's use of E Commerce is to improve marketing performance. Empirical evidence that the craftsmen in general understand that the use of E-Commerce for companies can help improve the performance of the company. Menurut the pengrjin one of the reasons why companies need memanfaatkan E Commerce is due to E Commerce craftsmen can improve market access for producers and may reduce the cost of marketing. But they do not agree that the use of e-commerce to facilitate the transaction process and enhance customer relationships. Logical explanation of this attitude is partly due to the sale of conventional offline still dominates the sales process for almost all craftsmen diwawancarai. Only a few of those who make sales online.

4.2. External Factor Drivers

The adoption of information technology cannot be separated from the external influences that will provide inspiration for business owners and managers to memanfaatkan information technology. The craftsmen consider that the demands of competition, customer expectations, and the government's call dronganmerupakan external factors that helped furnish their decision to adopt E-Commerce. The results of in-depth interviews indicate that the three factors that are considered as factors driving the adoption of E-Commerce for the batik craftsmen, the demands of competition are the driving factor that is considered dominant.

Meanwhile, the batik craftsmen in the center of batik in PropoPamekasan add other external factors are also driving the decision menjadi adopt E-Commerce, which is a boost community of batik craftsmen. The interesting thing is that in general the craftsmen do not agree that the urge business partners as an external factor that can be a driving force for Madura batik craftsmen to adopt E Commerce. The craftsmen actually consider that many business partners who do not want them to use e-commerce as a marketing medium. This is because the business partners assume the existence of craftsmen in the online market as the threat of competition for them.

4.3. The Inhibitor of E Commerce Adoption for SME

There are several factors that may be inhibiting the adoption of information technology in a business unit. Based on interviews researchers grouped the factors inhibiting the adoption of information technology in three categories, namely the cost constraints, human resource constraints and the complexity of the technology.

One of the factors inhibiting the adoption of information technology is cost constraints. Interviews showed that based on the perception respondent, in general, cost constraints are a limiting factor for the craftsmen to carry out the adoption of information technology in particular E Commerce. The craftsmen agree that the costs to be incurred by the company for the initial investment, maintenance costs of information technology and the limited amount of funds allocated by the company is still a limiting factor for craftsmen. Of course, this cannot be separated from the reality that most producers are small-scale business units or even very small, so most of them still consider that the cost constraints are still a limiting factor for the adoption of information technology in particular E Commerce. It would be different if most of them are companies that have large economies of scale.

Information technology tools are used to help people in fulfilling their job done efficiently and effectively. Therefore, the process of adoption of E Commerce as one of the tools of information technology will be highly dependent on human resources that will operate or memanfaatkan these technologies. In general, the craftsmen agree that lack of knowledge of employees is one of the factors inhibiting the adoption of information technology for the craftsmen. In addition, in terms of technical expertise, the craftsmen agree that the limitations of these skills can be panghambat in the implementation of information technology adoption for batik craftsmen. The simplicity of a technology for the users would greatly help to facilitate the operation. Therefore, especially information technology is too complex E Commerce can be an obstacle for the users to use it optimally.

According to the craftsmen complexity of information technology, especially E Commerce is a factor that could hinder the process of adoption of E-Commerce. Most craftsmen still consider that the application program that is difficult to learn and to operate is still a factor that inhibits the adoption of E-Commerce for craftsmen. In addition, the limited guidance available to facilitate the operation of E Commerce independently as well as technical support of information technology specialists (consultants also still a limiting factor for the adoption of the E Commerce.

4.5. Modelsof E-Commerce Adoption fo Small and Medium Enterprises

Adoption of E-Commerce, especially information technology within an organization is a very complex process. In order to improve creativity and performance marketing, information technology adoption in an SME based on several factors. In this study, it was found that the factors that determines the adoption of E-Commerce is the individual characteristics, technological characteristics, the context of the company and the environmental context. Schematically patterns of adoption of information technology for Madura batik craftsmen illustrated in Figure 3. Individual characteristics associated with an educational background as well as craftsmen perception of the benefits offered by information technology in this case E-Commerce for the progress of his business. Technological characteristics referring to the suitability of the technology to the needs of the organization and the level of technology for ease of operation.

While the context of the company related to the availability of funding sources as well as the readiness of human resources to support the implementation of information technology. While the environmental context is, the external factors consisting of encouragement competitor, customer demand government support and encouragement community of craftsmen to adopt information technology. Madura batik craftsmen in leather craft centers in Bangkalan, Pamekasan and Sumenep, mostly micro enterprises and small businesses with limited manpower and funding. So, although most producers have an adequate educational background, a good perception of the benefits of E-Commerce, as well as aware of the boost to external factors largely craftsmen megalami constraints in, terms of readiness of human resources and limited financial resources.

In addition to the internal factors of the company, craftsmen also gain encouragement and pressure from outside parties, namely competitors, customers and community government's tusil batik craftsmen who participated into consideration for craftsmen to adopt E-Commerce. The results support the research terdahuku which states found that the most common reason for the adoption of information technology is to provide a means for meempertahankan survival and / or increase growth, improve competitiveness and innovation (Nguyen, 2008). Even dorngan of internal factors and external factors the company is very strong, but the adoption of information technology will not automatically ddilakukan by the company.

There are several factors that can hinder the adoption of information technology for the craftsmen. At least two factors become an obstacle for the craftsmen to adopt E-Commerce. Based on data analysis identified that the factor inhibiting the adoption of E-Commerce consists mainly of cost constraints and human resource constraints. For companies the costs for the initial investment, maintenance costs of information technology in this E-Commerce and the limited amount of funds is still a limiting factor for most of the batik craftsmen. In predicting the degree of adoption of E-Commerce for craftsmen there are four factors to consider, namely the individual characteristics, the characteristics of information technology, enterprise context and environment context.

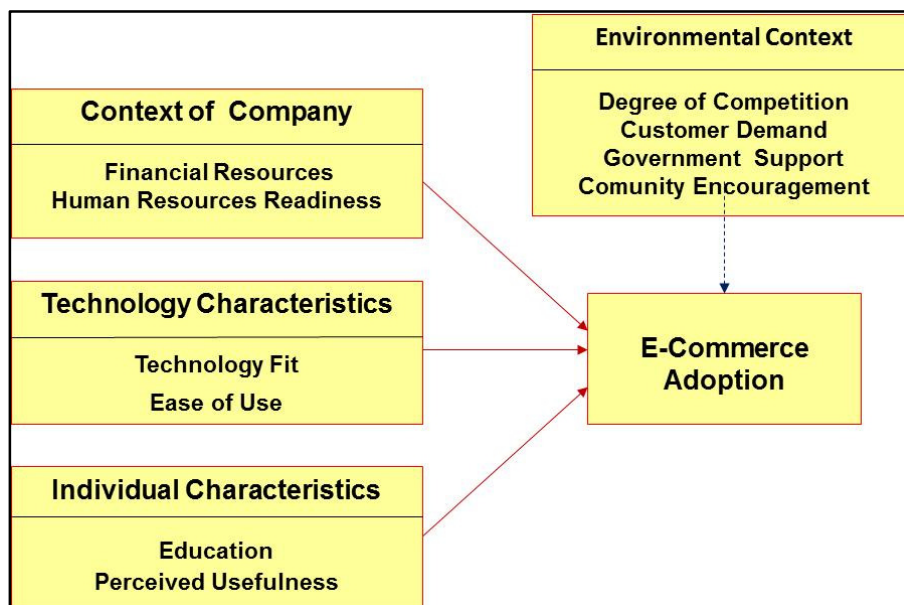


Figure 2: Models of E Commerce Adoption for Madura Batik Craftmen

4.5.1. Individual Characteristics

The first factor is characteristic of the individual, that individual's background as a decision that will determine whether the company needs to make the adoption of E-Commerce as a form of information technology or not. The level of education of individuals providing better insight for leaders in assessing the role of information technology to enhance the competitiveness of enterprises. Better knowledge about information technology in particular E Commerce as the basis for evaluating the role of a leader in information technology preformance this E Commerce.

Individual perceptions about the benefits of information technology in particular E Commerce will determine its attitude to the adoption of information technology in the form of E Commerce. If a craftsman assume that information technology in particular E Commerce provides many benefits in improving the performance of the company it is likely that it will have a positive attitude towards the implementation of information technology in the company. Instead it will be negative if the perception of the benefits of information technology (E-Commerce) for perusahaan low. Furthermore, it will be decisive whether he would agree to adopt information technology / E Commerce or not.

4.5.2. Information Technology Characteristic

The second factor is the characteristics of information technology. The suitability of the information technology functions of the company's operations is a very important consideration in the decision of the adoption of information technology. The company will only choose the technology that can support the smooth and efficient operation of the organization. Anything as sophisticated a technology, if the technology is not in accordance with the operational needs of the company, the technology would not benefit the

company. So, the benefits of information technology, especially E Commerce for companies is determined by the correspondence between the features offered by the E-Commerce applications with the need completion of tasks / work required in carrying out the functions of the organization.

Based on interviews and group discussions is known that information technology is expected to provide security for its users and is able to provide benefits in developing creativity for craftsmen. The producers expect that the application of E-Commerce system most cannot provide protection for designs of batik motifs them to the risk of piracy by competitors. In addition, application of E-Commerce is also expected to provide a database for the whole design motif that amounted to hundreds even thousands of motives. This database is expected to help facilitate the development of creative imagination of the funds to create new batik designs using a combination of old design motif as a source of inspiration.

The other side of the characteristics of information technology is its simplicity to operate. Not everyone has the technical background of computer skills. Therefore, the ease of information technology for the operation is a very important thing. In general, people will like the technology that is not too complicated. Conveniences to learn and ease of operation is a critical requirement for companies to adopt the technology. Both employees, managers, customers or business mitra concerned about the level of the technological ease of operation. Because nobody would be made difficult simply because it cannot operate a technology which is basically just a tool. So, when the decision makers will decide to opt adopt information technology or not then one consideration is whether the technology in this case E Commerce application is quite easy to be operated or not, especially for all those who nati will deal directly with the information technology.

4.5.3. Company Context

The context of the company with regard to the readiness and preparedness of human resources budget / sources of corporate funds to support the adoption of information technology. Readiness of human resources, especially the employees is directly related to the application of information technology will be an important consideration in the implementation of information technology adoption. Without the support of skilled resources, information technology will not be much benefit. The inability and unwillingness of human resources for the use of information technology in the company's operations will only add to the waste of money for the company. Being spent because it is the readiness of human resources, especially the employees to operate the information technology is a very important consideration for a craftsman to determine whether to adopt the E Commerce Application or not.

Another aspect of the context of the company is the readiness of the budget or the source of funds to support the adoption of E-Commerce. Adoption of E-Commerce requires a lot of fund, both the cost of the initial investment and operating costs. Without the support of adequate funding, the company would not be able to finance the adoption of information technology. For large companies, the cost may not be a problem. But for small businesses, especially micro-enterprises to cost constraints could be a very decisive factor. Therefore, the readiness of the company's budget for information technology funding allocation in this case E Commerce application is one important factor in the decision to adopt information technology for Madura batik craftsmen.

4.5.4. Environmental Context

In the competition of business, the company is very concerned about the external factors of the organization. Therefore, in order to improve the competitiveness of the organization, both in terms of operating efficiency to reduce costs, the suitability of the product design to consumer needs and to improve the quality of service for its customers, the company is very important untuntut attention to the environmental context. Environmental context in this study with regard to the demands of competition, customer demand and boost business partners.

Competitors are a threat to employers. Every company does not want to miss the other competitors. Therefore, when the competitors already using technology better then the company must strive to catch up with technology similar or better than those of competitors. If not, then the company must be prepared to be left by its competitors. Many foreign batik products that have been coming into the country through online marketing. Of course, this will be a separate consideration for the company to capture market share in the country, the more foreign markets abroad. Thus, the demands of competition are one of the determining factors in the decision for the craftsmen to adopt information technology (E-Commerce) or not.

On the other hand, the use of information technology (E-Commerce) as well as online marketing media while providing a threat to the craftsmen, particularly with respect to copyright infringement by competitors. Marketing online requires the disclosure of information regardless of who the visitors of a website. It becomes its own concerns for craftsmen Madura batik motif design on the risk they hijacked and imitated by competitors. The risk of loss will be even greater if the competitor is a company that produces batik printing, with a large production sskala so as to reduce production costs. As a result, their competitors will be able to sell at a price much cheaper. This phenomenon makes the craftsmen are reluctant to display all pages' motif in their official website. Usually to follow up the order request, the craftsmen will open channels of communication with customers through personal messages using a mobile phone.

Currently the use of computers to assist in the design of products as well as a marketing medium has been used by many manufacturers of craft products in different countries. Loyal customers are a dream for every company. To ensure that customers remain loyal, smart companies need to satisfy the needs of customers. The customers not only require a quality product, but also require the products according to the needs and abilities of the funds. They also go a service that spoil them. In this era of information technology marketing system through the internet provides an alternative marketing medium that allows for consumers in particular who do not have time to visit the show room of craft products to be able to obtain the products desired in accordance with the needs by optimizing the selection according to the ability of funds in a way that relatively easy. Consumer demand for flexible services through

an online marketing system can be one of the considerations for the Madura batik craftsmen to adopt E Commerce as one of the forms of information technology to complement offline marketing system.

To support the operational activities of the business, the company needs to work together with business partners. Particularly for the marketing agency that is in a remote location, information technology provides much convenience to transact with the company. The marketing agency is usually not only take the product from one manufacturer only. Of course they will compare the ease bertaransaksi with the other producers. If the company does not pay attention to feedback from business partners, then gradually this cooperation will certainly be going well. It would be very detrimental to the company. Based on the results of the interview are known causes of why business partners less require the craftsmen adopting e-commerce, namely the concerns of craftsmen became a competitor for them. It certainly can be taken a middle ground, where the business partners as a marketing agent for craftsmen given the assurance that the prices given by pengrajin to consumers will not be cheaper than the price set by the agency as their business partner.

5. Conclusions, Recommendations and Limitations

In general it can be concluded that: the adoption of E-Commerce for Madura batik craftsmen in Bangkalan, Pamekasan and Sumenep is still relatively low. A major incentive for batik craftsmen to adopt E-Commerce are the benefits of E-Commerce to increase competitiveness, enhance marketing performance as well as the encouragement of external factors. On the other hand, an inhibiting factor for SMEs to adopt E-Commerce is the cost constraints, human resources and information technology complexity. There are four factors that determines the process of adoption of E-Commerce for Madura batik craftsmen, ie individual characteristics, technological characteristics, the context of the company and the environmental context.

Based on the Resource-based View, the company is very concerned to realize ownership of resources that are not owned by another company. In the context of intellectual property rights protection, the craftsmen have difficulties in maintaining and protecting the motifs and designs that are created from the threat of competitors. According to the craftsmen, they are creating a new batik motifs and designs. During this time, the new brand protection can be done, by registering the brand to the justice ministry. But they are unlikely to enroll all motifs and designs of their works whose numbers can reach hundreds and even thousands of design motif. As the implications of intellectual property rights protection, especially motif will become an important issue in the development of E-Commerce adoption model as an online marketing media for craftsmen. In connection with the advantages and disadvantages of online marketing as a medium that requires widespread disclosure should be developed E-Commerce applications are capable of protecting the Madura batik craftsmen from the threat of copyright infringement by manufacturing companies batik (batik printing) especially design motif..

In order to improve the adoption of E-Commerce among Madura handmade batik craftsmen, needed some intervention programs include: a) Development of the craftsmen to provide insight into the potential importance of information technology in particular E Commerce in medukung marketing activities for batik craftsmen. b) Provision of training and mentoring penerapaaan E Commerce applications for craftsmen Madura batik work together universities and the Department of Cooperatives and SMEs as well as the community of Madura batik craftsmen .. c) Preparation Procedures manual or handbook E Commerce applications are simple and easy to understand for lay users to support the marketing activities for the batik craftsmen.

This study was conducted using a qualitative approach. Of course, the adoption of E-Commerce models are built based on information taken subjectively better represent conditions in the sphere of small business in the sector in Madura batik craft that may not be digeneralisir on another craft business sector.

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