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E-commerce as Innovative Behavior for Female Entrepreneurs of Jonegoroan Batik

Nur Laily*, Triyonowati, Wahidahwati

Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA) Surabaya, East Java, Indonesia

Corresponding author e-mail: lailie1214@gmail.com

ABSTRACT

Indonesian women are greatly interested in home industries, including batik industry. Obviously, they possess self-efficacy and creativity to pursue their entrepreneurship desire. However, their innovative behavior can be weakened due to management barriers and marketing problems that decrease their product sales. Hence, this study aims to investigate whether or not a web-based marketing management model is applicable for female entrepreneurs of Jonegoro batik. This is an experimental research with samples of 35 female entrepreneurs of Jonegoro batik in Bojonegoro. Furthermore, this study suggests applying one of marketing methods, i.e. online marketing or e-commerce to overcome the obstacles of product sales. Information systems on e-commerce for small and medium enterprises is equipped with features as a campaign media and buying and selling transactions with consumers. The system was created with PHP and MySQL. This marketing information system contains sales reports, products inventory, and product data search process. Moreover, the results of system application are able to provide customers options for buying and selling transactions so that data management is more effective. Furthermore, this research provides adequate information on how to increase sales and customer loyalty towards Jonegoroan batik SMEs.

Index Terms: E-Commerce, UMKM, information systems, buying and selling online, batik industry.

I. INTRODUCTION

Innovative behavior can lead female entrepreneurs to advance their business success. Likewise, innovative behavior is also generated by female entrepreneurs of Jonegoro batik in Bojonegoro so that they are able to manage their business well (Sandjaja & Riyanti, 2004). The attitudes are said to encourage business people to be creative and assertive in establishing a business. The contemporary behavior is also due to Javanese cultural background that address various characters, such as: patient, careful, sensitive, diligent, and hard-working (Sandjaja & Riyanti, 2004). These original behaviors are required to expand broader business networking.

However, an entrepreneur with innovative behavior may be failure owing to inappropriate business strategies. This study argues that the decreasing sales of batik Jonegoro is due to the female entrepreneurs' marketing strategy. Recently, this batik industry in Bojonegoro focuses on traditional marketing strategy. Most of small to medium enterprises (SMEs) have limited markets because Indonesians are provided with inadequate information about Jonegoro batik industries. Instead, this study justifies that the entrepreneurs of Jonegoro batik have limited capabilities in expanding their products broader as well as in providing larger economic spaces among SMEs throughout Indonesia. As the result, the batik small-scaled businesses within Bojonegoro area remain weak and limited. Hence, this study suggests that marketing information becomes central and strategic issues. In particular, e-commerce appeals as an appropriate marketing solution for entrepreneurs of Jonegoro batik industries in order to develop

businesses widely. Based on the description above, this study intended to investigate the effect of web-based marketing innovation model on the development of batik SMEs in Bojonegoro, Indonesia.

II. THEORETICAL REVIEW

Innovative Behavior

Innovative behavior is essential to advance entrepreneurs' businesses. Referring to Wess and Farr (in De Jong & Kemp, 2003), it is an individual behavior that directs to introduce, apply, and produce new things that are useful at various organizational levels. Similarly, Stein and Woodman (in Brazeal & Herbert, 1997) indicate that innovation is a successful implementation of creative ideas. While Bryd and Bryman (2003) figure out two dimensions that underlie innovative behavior, namely creativity and risk taking. Otherwise, Amabile et al (in De Jong & Kemp, 2003) argue that all innovations must begin with creative ideas. Focusing on innovative behavioral research is a key factor of incremental innovation (Scott & Bruce, 1994; de Jong & Kemp, 2003). In brief, innovations that are compatible with innovative behavior are called as incremental innovations.

Marketing Information System

The marketing information system is designed as a management's information system for marketing decision. According Jobber, it is a system which marketing data is formally collected, stored, analyzed, and distributed to managers in response to their information needs on a regular basis (2007). Instead, marketing

information system can be defined as a set of procedures and methods for collection, analysis, and regular and planned information presentations to have marketing decisions (Kotler, et al. 2006). Indeed, the term of marketing information system is relatively broader rather than the term of market research (Reid & Bojanic, 2010). Market research includes information that is not collected for a particular reason or project, its main purpose is one-time usage. In contrast, marketing information system constantly collects data, present routines, and systematic data. This is not only for one particular topic, but also for monitoring and ensuring the achievement of marketing success. Accordingly, this marketing system relates to e-commerce. The latest is a new system or paradigm of business that shifts traditional commerce paradigm into electronic commerce. E-commerce utilizes ICT (Information and Communication Technology) or electronic device technology; and it uses internet as its main media (Zaky Achmad. 2011).

Basic Concepts of E-Commerce

E-Commerce is the system for distributing, purchasing, selling, and marketing goods and services through electronic systems, such as: internet, worldwide web (www), and other computer networks. E-commerce also includes other services, such as: electronic fund transfers, electronic data exchanges, automated inventory management systems, and automated data collection systems.

Moreover, there are some components for e-commerce market mechanism. First is a customer as the internet user who is potential for target markets. Second is the seller who offers various information that relate to particular products and services. The offer can be addressed to individuals and organizations; and the sales process apply website media owned by the seller. Third is e-commerce transaction in which the products are offered in the form of digital products. In other words, the products are not in physical form, but only visualization images or product catalogs on the website page. Clearly, the customers do not directly see the digital products, but they can see the products through the web application. Fourth is front end that seller and buyers can interact online. Front end is a web application that can interact with users directly. Many business people also provide catalogs, shopping carts, and search engines on their front end. Fifth is market infrastructure that uses electronic media includes the use of hardware, software and computer network systems as in the usage of internet communication networks. Sixth is back end in which activities like ordering goods, product management, payment processing, and product delivery are included in the back end of business process. In other words, back end is form of application that indirectly support the front end application. Seventh is business partners who can collaborate with producers. An example of business partner is a bank that provides a facility for payment gateway either via transfer or mobile banking (m-banking). This facility lead customers to be easier to pay. Last, e-commerce requires trust and secure transaction service. As it is an online business, so trusty and security are essential for customers. Therefore, e-commerce companies need to guarantee security in the process of e-commerce transactions

III. RESEARCH METHOD

This research applied the experimental method in order to know whether or not a web-based marketing management model is applicable for female entrepreneurs of Jonegoro batik. On the early stage, criteria for a model of web-based MSME marketing strategy should be designed. In the next stage, creating web system is

generated in accordance with the model of the small business marketing strategy. Then, the implementation of web 2.0 system will be trialed into a small business marketing strategy model, instead of a conventional marketing system. In addition, population of this research were 35 women who own Jonegoro batik small-scaled industries. The location was carried out in Bojonegoro Regency, East Java.

Data Analysis Techniques

In this study, System Development Life Cycle (SDLC) was applied as the model for development method. This has structured development stages starting from planning, identifying and analyzing new and old systems, designing conceptual and detailed system design, maintaining the system, creating and operating manual book for system installation. Moreover, the concept of SDLC underlies various types of software development methodologies in software engineering. The development of SDLC includes a process to develop information systems. While the stages for SDLC method involve system policy and planning, system analysis, general system design, detailed system design, implementation, and system maintenance. These are described below:

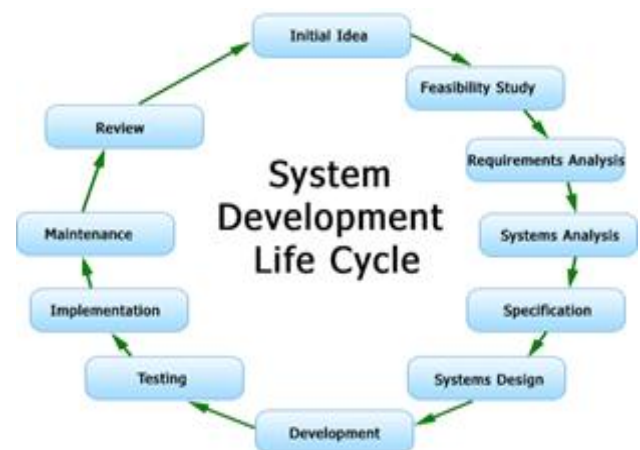


Figure1: Model of SDLC System Development

IV. RESULTS AND DISCUSSIONS

This study examined the effect of e-commerce innovation model on the development of batik SMEs in Bojonegoro, Indonesia. Implementation for this research was on the system design using UML (Unified Modeling Language) as well as the creation of web-based application programs using PHP programming language and MySQL server database. These were utilized as a backend storage of e-commerce applications.

Additionally, use case diagram was applied to perform processes of ordering and purchasing products made by batik consumers. The diagram is also used to describe detailed activities carried out by online store managers, including: administrators, warehouse and owners. Furthermore, the design of class diagram can be used in e-commerce application. In this study, the web application was based on specifications database of Jonegoroan batik small-medium scaled industries. The following figure shows the display of e-commerce application of Jonegoro batik industries; but other programs are displayed in this paper.



Figure 2: System Home Page

The web display informs various e-commerce applications of Jonegoro batik small-scaled industries, located in Bojonegoro, East Java. In the home page of web application, lists of batik products that are sold to customers as well as other menus, including batik categories that are perceived as the customers' wants. Overall, the online marketing system provides various information in regard with Jonegoro batik so customers throughout Indonesia are able to search, choose, make orders, and purchase more batik products.

V. CONCLUSION

Today, businesses are developed online through websites. This e-commerce marketing system can analyze sales of a product. On the other side, customers are able to get information about batik products quickly and easily. Hence, this study argued that e-commerce application can help both sellers and buyers to conduct online selling and buying transactions. The online system can also reduce distribution costs, inform detailed product prices, and product availabilities. Moreover, e-commerce application provides services of which customers buy products without coming to the store as well as buying products from different areas. Otherwise, this study indicated an obstacle on the implementation of e-commerce, i.e. the customers' lack of trust on online shopping security. This relates to their assumption that the Indonesian government provide less security assistance on e-commerce transactions.

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Corresponding Author -*Nur Laily**Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA)
Surabaya. East Java, Indonesia