E-COMMERCE STRATEGY TO DEVELOP TATAH SUNGGING KULIT CREATIVE INDUSTRY IN SOLO RAYA, CENTRAL JAVA, INDONESIA

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ABSTRACT

Tatah sungging kulit, a form of Indonesian art product, is an Indonesian tourism asset that has been recognized throughout the world for its uniqueness and beauty. It is an opportunity to maintain a traditional art amid the changing society. However, whether it can compete with other creative industries in the developing tourism industry and global marketing environment is a question which needs to be answered. E-commerce is one possible answer to the problem of the market competition. The purposes of this research are; (1) to analyze the external and internal factors in developing e-commerce for tatah sungging kulit creative industry; and (2) to formulate an e-commerce development strategy for tatah sungging kulit creative industry. To analyze external factors, two approaches were used; STEEPLE analysis and The Five Forces Model approach. An analysis of the internal factors was conducted using corporate value chain analysis by analyzing primary and supporting activities. Meanwhile, to formulate an e-commerce development strategy, SWOT analysis was used.

The formulation of an e-commerce development strategy for tatah sungging kulit creative industry, based on SWOT analysis, includes: (1) developing a Supply Chain Management (SCM) system, (2) establishing e-commerce, (3) transferring tatah sungging kulit art skill to younger generation, (4) holding human resource training in information technology and communication, and (5) outsourcing management or recruitment for e-commerce services.

Keywords: tatah sungging kulit, e-commerce, creative industry, Indonesia

INTRODUCTION

Globalization and global trade market are inevitable within the development of technology. The use of information and communication technologies contributes to the country’s efforts to
compete, especially through an Internet-based media network. It is due to the fact that the current market preference of tourism consumers has been largely influenced by digital information through the Internet, such as through travel blogs or websites of tourism service providers. Internet users, particularly social media users, have been massively supporting the expansion of national tourism industry. Without being asked, they help promote tourism news online through digital contents related to traveling.

In Indonesia, especially in Java, one souvenir type which attracts tourists is *tatah sungging kulit* (leather carving and coloring) products. *Tatah sungging* (carving and coloring) is a form of Indonesian art that receives the world’s recognition for its uniqueness and beauty. *Tatah sungging kulit* products are sold as souvenirs in many tourist attractions such as Borobudur and Prambanan temples, Keraton Surakarta and Yogyakarta, and also in other historical tourist attractions.

*Tatah sungging kulit* is usually related to *wayang kulit* (shadow puppets), because it decorates the main component of the performance. *Tatah sungging kulit* has also received the world’s recognition as a world’s cultural heritage from Indonesia that needs to be conserved and preserved. The former Indonesian Minister of Culture and Tourism, I Gede Ardika, stated that since November 7, 2003, UNESCO has recognized shadow puppets as one of the world’s Master Piece of Oral and Intangible Heritage of Humanity.

However, recently the existence of *wayang kulit* begins to fade. This happens because *wayang* artisans are incapable of facing the global market competition and dealing with the large incoming waves of popular culture.

As well as being well known as the center of Javanese culture development, Solo and its surrounding satellite areas (Boyolali, Sukoharjo, Karanganyar, Wonogiri, Sragen, and Klaten) are also famous for its *tatah sungging kulit* industry. However, only few regions within still maintain the industry, and the number is expected to decline gradually. The fact becomes a huge concern for a particular society who strongly supports the preservation of this beautiful and unique culture.

To promote the positive image of *tatah sungging kulit*, definite efforts such as creating a development strategy need to be made. Creating a development strategy, particularly distribution strategy, through a proper media is needed in order to reach as many people, mainly the younger generation, as possible. Information and communication technology-based media as a mean of product marketing and value creation instrument for a product is an element that cannot be separated from the development of a business. Kotler (2002) stated that recently, marketers have gradually shifted from relying on conventional markets to the cyberspace.

One of the most rapidly developing marketing media among the recent society is e-commerce, a direct marketing conducted with electronic network and appliances. E-commerce is expected to be a solution to recreate the local and global market of *tatah sungging kulit* products, in order for the products to compete with others. Thus, the culture will be able to adapt to the developing era of communication and technology. For that reason, a research is needed to analyze the internal and external factors in developing e-commerce for *tatah sungging kulit* creative industry and to invent a strategy to develop e-commerce for the industry.
E-COMMERCE

E-commerce, which stands for electronic commerce, is a form of trade in terms of products or services between businesses, households, individuals, governments, and other public or private organizations, by using internet-connected computer (Ahmadi, Hermawan, 2013). E-commerce definition has three aspects, namely commerce, business function, and collaboration. Based on those, e-commerce can also be defined as a sharing of business information, maintaining business relations, and conducting business transactions by means of telecommunications networks before, during, and after the trade (Zwass, 1998).

In virtual culture, there is a developing social phenomenon related to the Internet and communication networks. The phenomenon is refered to as cyberculture (Lev Manovich, 2001). Cyberculture enables people to conduct economic and trading activities through the Internet, so that buyer and seller do not have to meet face to face. According to Ahmadi and Hermawan (2013), there are several types of transaction in implementing e-commerce system. The transaction types include:

1. **Collaborative Commerce (C-Commerce):** Online collaboration and interactions among business partners.
2. **Business to Business (B2B):** Trading between firms characterized by (1) long-term relationship between trading partners, so the trading process is based on trust, (2) continual and periodic data exchange, (3) initiative in partnership, and (4) peer-to-peer model of trading.
3. **Business to Consumers (B2C):** Businesses or transactions conducted directly between a company and an individual consumer. The company sells products or services to the consumer online through the Internet network. The characteristics of B2C are open to the public, providing generic and on-demand services.
4. **Costumer-to-Business (C2B):** A business model in which consumers inform their need for a particular product or service, and the suppliers compete to provide it to the consumers.
5. **Customer to Customer (C2C):** A business model that facilitates the transaction of products or services between customers. A customer directly sells products or services or advertises private services to other customers on the Internet.

E-commerce encourages people to conduct business activities independently. To conduct it, one needs sufficient knowledge and understanding about how its system works.

**METHODOLOGY**

The research is a descriptive analytic research. The location of the research covers the region of Solo, Central Java, and its surrounding satellite areas that consist of 6 (six) regencies: Surakarta, Karanganyar, Sragen, Wonogiri, Klaten, and Boyolali.

The research data were obtained from direct interview with key informants such as *tatah sungging* artisans, raw material suppliers, sellers, consumers, and policy makers in the region of Solo.
To create an e-commerce development strategy, the researchers used the fit model based on the changes which occur within the external as well as internal environment of *tatah sungging kulit* artisans. The external factor analysis was performed through two approaches; STEEPLE analysis and Five Forces Model analysis that was introduced by Michael Porter. The internal factor analysis was conducted using corporate value chain analysis, and by analyzing the primary activities and the supporting activities in the industry. To formulate strategy for e-commerce development, the matrix of SWOT analysis was used.

FINDINGS

This study attempts to identify and analyze the external and internal factors in developing the e-commerce strategy for *tatah sungging kulit* creative industry.

A. The External Factors Analysis

The external factors analysis was performed by employing two approaches, namely STEEPLE analysis and the Five Forces Model analysis.

1. STEEPLE Analysis

The followings are the results of the of the external factors analysis in *tatah sungging kulit* creative industry in Solo and its surrounding regions based on STEEPLE analysis. The analysis covers the general environment of the industry, and the findings are as follow;

a. Social

Changes in social and community structure may provide opportunities as well as threats for the development of a company. *Tatah sungging* industry is currently facing an era of globalization, in which various foreign popular cultures are invading the nation and making younger generation beginning to forget their own culture. Nowadays, the younger generation is more fascinated with foreign cultures rather than with their home country’s art and culture. For that reason, *tatah sungging kulit* only attracts certain generation and has a very limited number of enthusiasts. The consumers of *tatah sungging kulit* are mainly elderly people and art collectors who recognize and appreciate the value of the product. On the other hand, due to the rapid mastery of communication technology by people all around the world, the globalization era provides an opportunity for *tatah sungging kulit* product to be recognized and marketed worldwide.

b. Technology

Due to the rapid development of information and communication technology in all aspects of life, the need to access the Internet network becomes more vital. Data from the Directorate General of Information and Public Communication of the Indonesian Ministry of Communications and Information Technology indicate that since 2013, the number of devices including smart phones, handheld computers, and tablet computers has surpassed the population of Indonesia. There are approximately 240 million units of devices, while Indonesia’s population is only about 230 million. The number is
expected to keep growing this year (Kompas, April 13, 2015). In addition, it is remarkable that the growing number of internet-based hardware is used only by a percentage of the total population. Up to 2015, there are about 135 districts and towns in Indonesia that still do not have access to the Internet.

c. Economic

In business sector, the government should improve consumer protection; provide capital assistance for micro, small, and medium enterprises; improve the quality of domestic products; and create Indonesian National Standard (SNI) labels for domestic products. Indonesia’s domestic products should be highly valued in the country and thus can be consumed optimally for the benefits and prosperity of the people. *Tatah sungging kulit* product is one of Indonesian craft products that has high potential to be marketed worldwide because of its uniqueness, beauty, and historical value.

d. Environmental

When processed properly, animal rawhide and skin will turn out into strong, flexible, durable, resilient, and timeless material. In *tatah sungging kulit* industry, the demand for animal skin needs to be managed appropriately. This is related to the limited availability of raw material due to the long period needed by the animal skin to be prepared for processing. According to the artisans, cow or buffalo horns that are needed for making wayang *gapit* (supporting pole) are quite difficult to find.

e. Political

There are several problems faced by many Micro, Small, and Medium Enterprises, particularly *tatah sungging kulit* industry in the region of Solo. One of them is the lack of support or assistance from the government in business management. Another problem is that there is not enough support for networks or partnerships establishment between industries, in terms of both capital and marketing.

f. Legal

Government’s policy and regulation play a very important role as relevantly demanded by the public in the implementation of Small and Medium Enterprises (SMEs). Without a government policy that supports SMEs such as *tatah sungging kulit* industry, the industries may face various obstacles such as capital constraint for production in their development. Up to now, artisans find it difficult to obtain business development loans, even though the policy brings benefits for the government as well as for the business organizer. For the government, the policy is necessary to maintain public order and provide protection to the public at large. For the business organizer, the policy is expected to provide social and economic benefits.

g. Ethical

In *tatah sungging kulit* industry, copyright infringement is inevitable. The product design may be imitated. Artisans do not have a specific product as a symbol of their original creations. In other words, their products are massively produced. Even if there is any modification, it is made only for the preciseness of the carvings and coloring by using different types of material. For this reason, *tatah sungging kulit* products are very prone to being copied or imitated.
Universitas Sebelas Maret (UNS) is a university in Solo that has been mentoring Small and Medium Enterprises (SMEs). The mentoring activity is conducted by the Research Center for Cooperative and Micro, Small, and Medium Enterprises Advisory of the Institute for Research and Community Services. One of its activities is developing e-business. The effort to establish e-commerce for *tatah sungging kulit* industry is a collaborative activity between UNS, *tatah sungging kulit* craft centers, and the local government in order to expand *tatah sungging kulit* products market to a wider society.

2. **The Five Forces Model**

The following are the results of the external factors analysis in *tatah sungging kulit* creative industry in Solo based on The Five Forces Model analysis, which was conducted to analyze the operational system of the industry.

a. **Threats of potential new entrants**

Nowadays, *tatah sungging kulit* industry is facing a threat from competitors who produce *tatah sungging* products made from raw materials other than leather such as from cardboard and wood. Thus, *tatah sungging kulit* industry should create a strategy to deal with competitors. These competitors are mostly located in Klaten.

b. **Bargaining power of suppliers**

*Tatah sungging kulit* industry in Solo has a broad opportunity since the region has an advantage as the supplier of *tatah sungging kulit* products for other areas such as big cities in Central Java, East Java, and even outside of Java. Most of *tatah sungging kulit* products exporters in Indonesia also purchase the products from Solo. Through these exporters, *tatah sungging kulit* products have been widely marketed in some of European countries and the Middle East such as Iraq, Iran, and Turkey.

c. **Bargaining power of buyers**

Seen from the buyer's bargaining power point of view, *tatah sungging kulit* industry, in fact, does not provide many options for the buyers due to the very limited market segment and limited distribution system. The products are distributed from artisans directly to wholesalers or exporters, or from artisans directly to consumers. With this distribution model, artisans have the advantage of being acquainted with their prospective customers; on the other hand, they do not have enough ability to expand their market network. Marketing the products through e-commerce is one way to expand the market share of *tatah sungging kulit* products.

d. **Rivalry among existing firms**

*Tatah sungging kulit* industry in Solo and its surrounding areas grows and is concentrated in certain areas or villages known as the craft centers. The fact that all artisans in a particular region live in the same villages provides opportunities for marketing co-operations which strengthen the supply chain management system. On the other hand, the condition also brings threat to the industry when there is competition between artisans in the industry. An example is price competition, which is still common.
among *tatah sungging kulit* artisans in Kepuhsari and Sidowarno village. Marketing products through e-commerce requires a strong system of supply chain management. This will happen if the artisans can synergize and have an awareness to conduct marketing co-operation and improve their marketing method through e-commerce system.

e. Threat of substitutional products

Another factor that must be taken into account in developing an e-commerce system for *tatah sungging kulit* industry is the existence of substitutional products. Since *tatah sungging kulit* products are sold as souvenirs, they should compete with other souvenir products that have the same values of excellence. The strong point of *tatah sungging kulit* industry is that its products have beautiful carving and coloring and as well as remarkable historical value and philosophy.

**B. Internal Factors Analysis**

To identify internal factors in *tatah sungging* industry, the researchers conduct a corporate value chain analysis by analyzing two activities in an industry; the primary activities and supporting activities.

1. **Primary Activities**

   The followings are the results of primary activities analysis in *tatah sungging kulit* industry in Solo and its surrounding regions.

   a. Availability of raw materials

   The large quantity of cowhides available as the main raw material for *tatah sungging kulit* industry is one of the strengths of the industry. Boyolali is one of the largest producers of cowhides in the region. In addition, the industry has also established supply chain cooperation with cowhides suppliers.

   b. Production process

   *Tatah sungging kulit* products are handmade, which means that the whole production processes are done by hand. Consequently, it takes approximately 10-14 days to finish a product. For this reason, *tatah sungging kulit* products are considered high-level artwork, which makes it difficult to be mass-produced. The duration of the production process is one of the weaknesses of the industry when brought to e-commerce, since online marketing requires promptness as soon as the market demands the products. Therefore, it is important to organize the supply chain system in the industry to compete in global market.

   c. Marketing

   Recently, the marketing model used in *tatah sungging kulit* industry is still limited to receiving orders from certain customers. There are four marketing channels in the industry: (1) Artisans sell the products to wholesaler traders according to orders. The traders then sell the products to collectors, who subsequently will sell them to exporters; the exporters sell the products directly to consumers. (2)
Artisans sell the products to wholesalers, and the wholesalers sell them directly to consumers. (3) Artisans sell the products directly to exporters, and then the exporters sell them to consumers. (4) Artisans receive direct orders from consumers.

d. Selling

Even though *tatah sungging kulit* products have a competitive price that is worth the quality, the price margins on different level of distribution are considerably high. However, artisans have a guarantee system (security assurance) in shipping/delivering their products.

2. Supporting Activities

The followings are the result of supporting activities analysis.

a. Human resources

The operational management of an industry involves many labors who own field-specific skills which take years to master. An artisan stated that it requires at least two years of training to master the required skills for the industry. Furthermore, the weakness of the industry is that most labors are over 50 years old and only have low level of education. Meanwhile, the younger generations are less interested to be involved in creative industries. The skilled labors shortage and poor labor regeneration are the biggest challenges faced by the industry in competing with global market which means that the industry will have to be ready upon starting to receive greater demands.

b. Management

*Tatah sungging kulit* creative industry is mainly managed in order to earn money for a living. Thus, the main purpose of running the industry is to gain as much benefit as possible to meet a final balance rather than to plan ahead to develop the business or expand its market share. Therefore, it can be said that the industry has weak management. This is considered a weakness in developing e-commerce for the industry, because through e-commerce, it is expected to gain good margins on each product line.

c. Capital

When a company claims at making ends balance only, it may indicate that the business is run with limited assets and capital. The lack of capital is indeed one of the most common problems faced by many artisans. This limitation makes it difficult for them to increase the production capacity, especially when they are faced with on-line sales system which requires high costs to provide computers and Internet as well as the costs of e-commerce infrastructure maintenance.

This condition is faced by many SMEs conducting business of selling souvenirs in some developing countries. Sindaga (1999) in Shaw (2004) described the condition of tourism in Kenya, which shows that many Africans cannot collect enough start-up capital to establish micro businesses that sell souvenirs to tourists. In fact, small-scale African business persons are forced to sell their products in temporary, unlicensed stalls, while the main souvenir shops are dominantly owned by Asians.
From the analysis of external and internal factors above, several strategic factors can be classified based on SWOT in the development of e-commerce for *tatah sungging kulit* creative industry (see Table 1).

### Table 1. Alternative Strategy by Using SWOT Matrix

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>External Factors</th>
<th>Threats</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1. Competitive price</td>
<td>O1. Free market era</td>
<td>W1. Age limitation of human resources and poor regeneration</td>
<td></td>
</tr>
<tr>
<td>S3. Good relations with raw material supplier and consumer</td>
<td>O3. Changes in consumer’s lifestyle in the era of mobile technology-online shopping</td>
<td>W3. Poor business management</td>
<td></td>
</tr>
<tr>
<td>S4. Product quality assurance</td>
<td>O4. Government policy regarding electronic commerce</td>
<td>W4. There is no sector that can facilitate business and promotion activities</td>
<td></td>
</tr>
<tr>
<td>S5. Strategic partner</td>
<td>O5. Academic: Revenue generating</td>
<td>W5. Limited venture capital</td>
<td></td>
</tr>
</tbody>
</table>

#### RESULTS

After identifying strategic factors in the industry’s external and internal environment, the researchers conduct an analysis of strategy creation using the SWOT matrix. The options are as follows (the SWOT matrix can be seen in Appendix Table 1):
1. Supply Chain Management Development

Since there is an established connection between artisans with raw material suppliers, resellers, exporters, and end consumers as well as quality and price assurance from each party, the proper strategy is to develop the pattern which already exists in the system into a more prominent one in a supply chain management. The model of supply chain management can be seen in figure 1.

![Supply chain value in tatah sungging creative industry](image)

Figure 1. Supply chain value in tatah sungging creative industry

2. E-commerce Establishment

Upon understanding the characteristics, potential, and the purpose of tatah sungging kulit industry, B2C (Business to Consumer) seems to be the most effective e-commerce strategy in marketing tatah sungging kulit products in Solo region.

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In terms of infrastructure and actual implementation, the e-commerce system will be initiated, built, and mentored for a year by the Research Center for Cooperative and Micro, Small, and Medium Enterprises Advisory at the Institute for Research and Community Services of Universitas Sebelas Maret. After a year, it is expected that the industry would be able to take over and develop the e-commerce system independently.

Several factors which make B2C the most appropriate e-commerce system for the industry are as follows:

- The characteristic of B2C is open to the public.
- The services provided are very general and the method can be adapted by everyone.
- The services are provided upon request.
- The transaction system is very simple

When implemented in an online store, B2C transactions may have several major challenges, such as building consumer privacy and trust; creating dependency and loyalty; and providing complete, diverse, and available goods and services.

3. **Skills and Knowledge Transfer across Generation**

Skills and knowledge transfer across generation is a strategy that need to be done. It is obvious that the process of knowledge transfer is an effort that must be well planned and needs to be carried out by every tatoh sungging center. There are several forms of activities which can be done, for examples: (1) introducing tatoh sungging by bringing back the art of puppetry to the younger generation and by providing facilities to arrange tatoh sungging products exhibition for public; (2) creating a digital media (could be both video and interactive one) and providing space and facilities to learn the art of tatoh sungging; (3) reviving wayang art studios as a place to learn about wayang and tatoh sungging; 4) opening internship opportunities in the company for younger generations.

4. **Human Resources Training and Outsourcing**

In general, the development of e-commerce in Indonesia is still hindered by the lack of human resources who fully master and comprehend e-commerce system both in technical and non-technical terms including banking, trading process, and legal system. The lack of human resources is mainly caused by the limited information availability, which can be solved by providing access to references such as e-commerce reference books, journals, or magazines, as well as other means of education, seminars, workshops, or development centers built by the government, education centers, and e-commerce experts.

**CONCLUSION**

Establishing e-commerce with universities involvement within the supply chain-management is a strategy that can be pursued in developing tatoh sungging kulit industry in Solo. Further, universities can provide a training for younger generations residing in tatoh sungging kulit industrial districts around Solo. The training will focus on how to manage e-commerce operation and system management. The
objective of the training is to prepare *tatah sungging kulit* industrial centers in Solo to be able to independently manage and develop their own e-commerce system. Therefore, the intention to preserve and develop *tatah sungging kulit* products as a supporting element in developing Indonesian tourism industry can be achieved.

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