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## Rural Entrepreneurs' Information Needs upon Entering E-Commerce

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## **Rural Entrepreneurs' Information Needs upon Entering E-Commerce**

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### **Abstract**

To introduce e-commerce to rural entrepreneurs, we need to convey information according to their needs. This article explains the information needs for rural entrepreneurs in developing their marketing through e-commerce. The proceedings concerning information needs for rural entrepreneurs were obtained through a case study approach in Tegalmanggung village, Sumedang Regency, Indonesia. The primary data in the study was acquired through observation, Focus Group Discussion, and interview. The primary data is then processed to get a picture of rural entrepreneurs' information needs to enter e-commerce. Based on the description, we made a SWOT analysis, formulate each point of the entrepreneurs' information needs, and combine them with business models from secondary data. At the end of the analysis, we also include information needs that need to be provided by resourceful persons who will guide the rural entrepreneurs to start e-commerce. The result of this study is expected to be an input for policymakers and practitioners in helping rural entrepreneurs entering e-commerce.

**Keywords:** *information needs, rural entrepreneurs, small and medium-sized enterprises, e-commerce, online shop*

### **1. Introduction**

Tegalmanggung is a village in the Cimanggung sub-district, Sumedang regency, West Java Province, Indonesia. This village has a lot of potentials, among others, are cultivation, plantation, livestock, small crafts industry, and tourism. Based on our research, in Tegalmanggung village a variety of small and medium-sized enterprises (SMEs) have developed, such as in textiles there are veil products, tobacco SMEs, air guns, wood cutting boards, and palm sugars. Some of the SMEs are developing well, however, the others are underdeveloped and or their productivity is declining. One of the SMEs that developed well and become one of the biggest SMEs in Tegalmanggung village is the SMEs of veil products. Veil products from Tegalmanggung village have been marketed to the outside of Java Island — Indonesia, meanwhile the marketing of the other SMEs' products was still limited to fulfill the locals and villages nearby. There are also traders from other regions who come to buy products from Tegalmanggung village, they know it through word-of-mouth advertisement.

Based on our observation on the field, the residents in Tegalmanggung village has the potential to become entrepreneurs, but they have struggles in promoting their products. For instance, they produce palm sugar from harvesting sugar palms. At first, the palm sugar that they produced was used to meet their daily needs and for a limited circle of people only, but with the endorsement from Village Owned-Enterprise (BUMDes), the products of palm sugar farmers and entrepreneurs are collected. BUMDes has a desire that the palm sugar produced by their community can be marketed online. Veil products from Tegalmanggung village are advertised outside of Java Island offline. Now, they want their products to be advertised online. Rural entrepreneurs realized that technological development has shifted the way people shop.

Online marketing has different characters than offline marketing. Consequently, to develop online marketing, a separate strategy is needed. In online marketing, potential consumers are faced with various appealing products just by opening a few pages on the website. Hence, understanding consumers' behavior in online marketing is very important (Kurniasih, 2019; Schwarzl & Grabowska, 2015). In addition to consumer behavior, the readiness of infrastructure, services, products, and online marketing structures must also be considered by online marketing practitioners (Nanehkaran, 2013). A study stated that online marketing strategies must be able to meet customer expectations, build customer loyalty by following business ethics, and increase benefits by building e-commerce that can promote sustainable competitive advantage (Falk, Sockel, & Chen, 2005). Thus, several factors must be considered in developing e-commerce; ranging from online consumer behavior, infrastructure, products, services, marketing structures and competitive advantages of corporates.

In the Forum Group Discussion (FGD), we saw that the rural entrepreneurs were very enthusiastic about voicing their desire to start expanding their product marketing through online marketing. To introduce e-commerce to rural entrepreneurs, we need to deliver information based on their needs. This article describes the information needed for rural entrepreneurship in expanding their marketing through e-commerce.

## **2. Literature Review**

E-commerce refers to a business transaction using the internet or computer or electronic media network. E-commerce uses digital technologies to create, transform and redefine valuable relationships between consumers with producers or between companies with individuals (Andam, 2012). Globally, e-commerce has exceeded retail growth significantly (Transperfect, 2017). In Indonesia, e-commerce has grown rapidly. The factors that influence the growth of e-commerce in Indonesia are the expansion of internet penetration and smartphone usage, the insensitivity of foreign investment on e-commerce platforms, the rising power of the middle class, online payment system and positive regulation from the government (Commonwealth of Australia, 2018).

E-commerce has presented new economic forms through technological acceleration in various economic attributes, among others are distribution, marketing, sales and subside companies' boundaries, suppliers, customers and competitors (Hasan, M.; Harris, 2009). Innovation is required to survive in e-commerce. Innovations are important to achieve the market's leading

position, identify and evaluate opportunities and new ideas in business, emphasize strategies changes towards the new forms of entrepreneurship (Hasan, M.; Harris, 2009).

In 2018, the Asian Development Bank Institute discovered that e-commerce has accelerated entrepreneurship and SMEs both in urban and rural areas significantly. At this point, e-commerce has encouraged households to establish new business entities and expand trading activity (Huang, Shaban, Song, & Wu, 2018). Another research in China and Taobao village revealed that e-commerce has extended the society's participation in entrepreneurship, created ore employment opportunities, and families' economic growth (Luo & Niu, 2019).

Marie Sicat (2015) stated that there are 8 key factors in developing e-commerce, specifically the availability of information and technology infrastructure, logistic facilities and trades, regulatory and legal environment, e-payment, platform e-commerce, the awareness in maintenance, skills upgrading, and e-procurement (Sicat, 2015). Meanwhile, Duncombe, et.al, mentioned a few steps to establish a business through e-commerce, such as start by using mobile phone device, join the online community, web publishing, web interacting, web transacting, web integrating in an electronic platform to perform e-business (Duncombe, Richard; Heeks, Richard ; Kintu, Robert; Nakangu, Barbara; Abraham, 2006). In which the cultural dimension plays an important role in the success of e-commerce (Alsmadi, Alhami, & Alsmadi, 2009).

Analyzation about information needs was done to find out the needed information. Information needs analyzation is a process to make a valuable judgment to provide solutions to a person's information needs problems. The analysis includes the analyzation rules or limits, the scope of the analysis, the purpose of the analysis, the targeted group to be analyzed, and information sources that can fulfill the information needs (Dorner, Gorman, & Calvert, 2014).

Narwood (1999) adapted Maslow's hierarchy of individual needs to portray the types of information needed by individuals. The individual needs are differentiate into five categories: first, at the highest level, individuals need information to build their cognitive, aesthetic, and self-actualization (edifying information), second, the need for self-esteem by empowering information that is related to pride and self-care (empowering information), third, individuals need information to develop their social relations (enlightening information), fourth, individuals need information for their security and safety (helping information), and fifth, the base one is that individuals need information to overcome certain situations, especially for short-term urgent situations that need to be solved (copying information) (Noorwood, 1999).

According to Pogorelova et.al.(2016) there are 4 basic information to guarantee offers in e-commerce, particularly offers based on the information given by the consumers through online forms in online shops, the accumulation of information through consumer's recommendation with keywords and other relevant features analyzation, information obtained from purchase history and algorithm analyzation of related products, information based on aggregated data about consumer's behavior starting from the order of the purchase, order list, shopping time/product preferences, shopping location, media social preference, comments, etc (Pogorelova, Yakhneeva, Agafonova, & Prokubovskaya, 2016).

Previous research shows that there are a few strategies that can be used to encourage rural entrepreneurs, in which a few of them are with increasing the knowledge and skills of entrepreneurs to continue to innovate to create new products and businesses, use new media to take advantage of new marketing channel opportunities, and create competitive advantages in order to compete with competitors (Kurniasih, Yusup, & Kuswarno, 2019).

### **3. Research Method**

Qualitative research methods with a case study approach were used in this study. Case studies functions to get a deeper understanding of a phenomenon or issue in real-life and natural context (Crowe et al., 2011). In this research, we examined the information needs of entrepreneurs in the Tegalmanggung village, Cimanggung sub-district, Sumedang regency, Indonesia, in expanding marketing through e-commerce. As of now, the marketing they do is still in a conventional way, through direct marketing to the consumers. They wish that they can join the online marketing to keep abreast with the times. To fulfill their wish, we need to analyze their condition and readiness to join the online marketing. One of the steps that can be done is to analyze their information needs. The result of this result, hopefully, can be an input for policymakers and practitioners in helping rural entrepreneurs entering e-commerce.

Observations, Focus Group Discussions (FGD) and interviews are used in the study to obtained primary data. Observations towards Small and Medium-sized Enterprises (SMEs) in Tegalmanggung village, Cimanggung sub-district, Sumedang regency was conducted together with our students in Thematic Entrepreneurship Community Development Program. Meanwhile, the FGDs were conducted with the Head of Tegalmanggung village along with its staff, 15 rural entrepreneurs, 10 students who took part in the Thematic Entrepreneurship Company Development Program, as well as the researchers. During the FGDs, we also interviewed some of the rural entrepreneurs.

The primary data was then processed to map out the information needs of rural entrepreneurs in developing their market through e-commerce. Based on that description, we made a SWOT (Strength, Weakness, Opportunity, Threat) analysis, formulate point by point of the entrepreneurs' information needs and combine them with a business model from secondary data through literature studies. At the end of the analysis, we also provide information needs that need to be provided by resourceful persons who will guide the rural entrepreneurs to start e-commerce marketing.

## **4. Results and Discussion**

### **4.1. Rural Entrepreneurs Background Analysis**

Based on the village's data, the total population in Tegalmanggung village is 6.620 people, in which 5.488 of residents work in various professions. The professions are farmers (1.732 people), farm laborers (1.992 people), breeders (1.368 people), employees of private companies (163 people), peddlers (72 people), small and medium-sized entrepreneurs (34 people), Civil Servants, TNI and POLRI (33 people), artists (28 people), air gun craftsmen (27 people), domestic servants

(14 people), retired civil servants/TNI/POLRI (14 people), mechanics (11 people), village's trained shamans (3 people), and alternative medical services (2 people) (Desa Tegalmanggung, 2019).

To explore the entrepreneurial potential in Tegalmanggung village further, we were helped by our students to conduct observations, FGD and direct interviews with several rural entrepreneurs and the village officials. We have tried to map the potential of rural entrepreneurs to implement e-commerce using a SWOT analysis. SWOT analysis is an analysis used to build an organization's business strategy so the organization will have a competitive advantage (GÜREL & TAT, 2017; Sammut-Bonnici & Galea, 2017). Table 1 below reveals the SWOT analysis result on the entrepreneurial potential in Tegalmanggung village.

*Table 1 SWOT Analysis Result on Entrepreneurial Potential in Tegalmanggung Village*

<b><i>Strengths</i></b>	<b><i>Weakness</i></b>
<ol style="list-style-type: none"> <li>1. There is a lot of entrepreneurship potential in the village.</li> <li>2. The residents are willing to use resources into business potential.</li> <li>3. The village officials are willing to support the resident's economic development through BUMDes.</li> <li>4. Support from the provincial government in one village one company program.</li> <li>5. Assistance from universities on Universitas Padjadjaran's Thematic Entrepreneurship Community Development Program.</li> </ol>	<ol style="list-style-type: none"> <li>1. The location of the village is far from the center point of the district.</li> <li>2. The resident's education level is still low.</li> <li>3. The inadequately of information and communications technology access, such as weak internet signal and the lack of wi-fi.</li> <li>4. The village does not have any high-grade quality products yet.</li> <li>5. The marketing of the products is still conventional, based on word-of-mouth promotion.</li> <li>6. Difficulties in shipping service due to the remote access to logistics.</li> <li>7. The residents do not know the venture capital access for their business growth.</li> </ol>
<b><i>Opportunities</i></b>	<b><i>Threats</i></b>
<ol style="list-style-type: none"> <li>1. The products produced by the village's SMEs, like sugar and veils are products that are needed in daily life so it will be easier to determine the target of the market.</li> <li>2. In general, the penetration of internet and online shopping usage in Indonesia increases. This shows the online market opportunity.</li> <li>3. The use of e-commerce can reduce the time, effort and costs on the product's distribution.</li> <li>4. Building the village's entrepreneurial ecosystem.</li> </ol>	<p>The evolution of information and communication technology has shifted people's shopping behavior (Kurniasih, 2019). There are so many retailers that go bankrupt because they cannot adapt to the market's environment change. Hence, the SMEs in the village must be able to anticipate these changes, like starting to design products' marketing through e-commerce or online shop.</p>

Table 1 shows that there are a lot of supporting factors if SMEs in Tegalmanggung village wanted to expand their marketing through e-commerce. Nevertheless, there are still a few weakness that needs to be resolved. From that weakness, the education of rural entrepreneurs can be seen as a starting point for their SMEs' market expansion through e-commerce. Education about e-commerce can be given based on the entrepreneurs' necessities.

#### 4.2. Rural Entrepreneurs' Information Needs in Developing the Market Through E-Commerce

Based on observation, FGD and interviews with local entrepreneurs, it can be seen that they want to give online marketing a try, but they did not know where to start. Thus, the rural information needs of rural entrepreneurs to develop their online marketing starts from the need of giving out basic online marketing information. Besides, Table 1 shows that the majority of the village residents' education level is low, so the information utterance must be used in simple language. It is used so rural entrepreneurs can absorb the information easily.

We begin the explanation about the information needs of rural entrepreneurs in developing the market by explaining the key elements of the e-commerce model. Comprehension in the business model will help the entrepreneurs to run their business effectively. We adapted Traver dan Laudon's business model (2009) to explain the information needs of the entrepreneurs, as shown in Table 2.

*Table 2 Rural Entrepreneurs Information Needs in Developing E-Commerce Based on Key Elements in the Business Model*

<b>Components</b>	<b>Information Needs</b>
Value Proposition	<ol style="list-style-type: none"> <li>1. E-commerce uses internet network and e-commerce platforms. Entrepreneurs need information about the characteristics of the internet, various e-commerce platforms, and consumer's characteristics on the online market.</li> <li>2. The Internet made consumers easily find and compare products in terms of the product's quality and service, price, and shipping costs. Therefore, the entrepreneurs need information on how to build the product's value so it can compete in the market, determining the rational prices and work closely with logistics delivery service so there will be a reduction in products' shipping costs.</li> </ol>
Revenue Model	In deciding the profits of online business, entrepreneurs need information about the online transaction models, like production cost, fees for the chosen e-commerce platform, advertising costs, reseller costs, tax, administration fees, shipping costs, etc.
Market Opportunity	E-commerce provides wider market opportunities. Entrepreneurs need information about the online market environment, how to detect whether a consumer is trustworthy or not, how to build a loyal consumer, how to

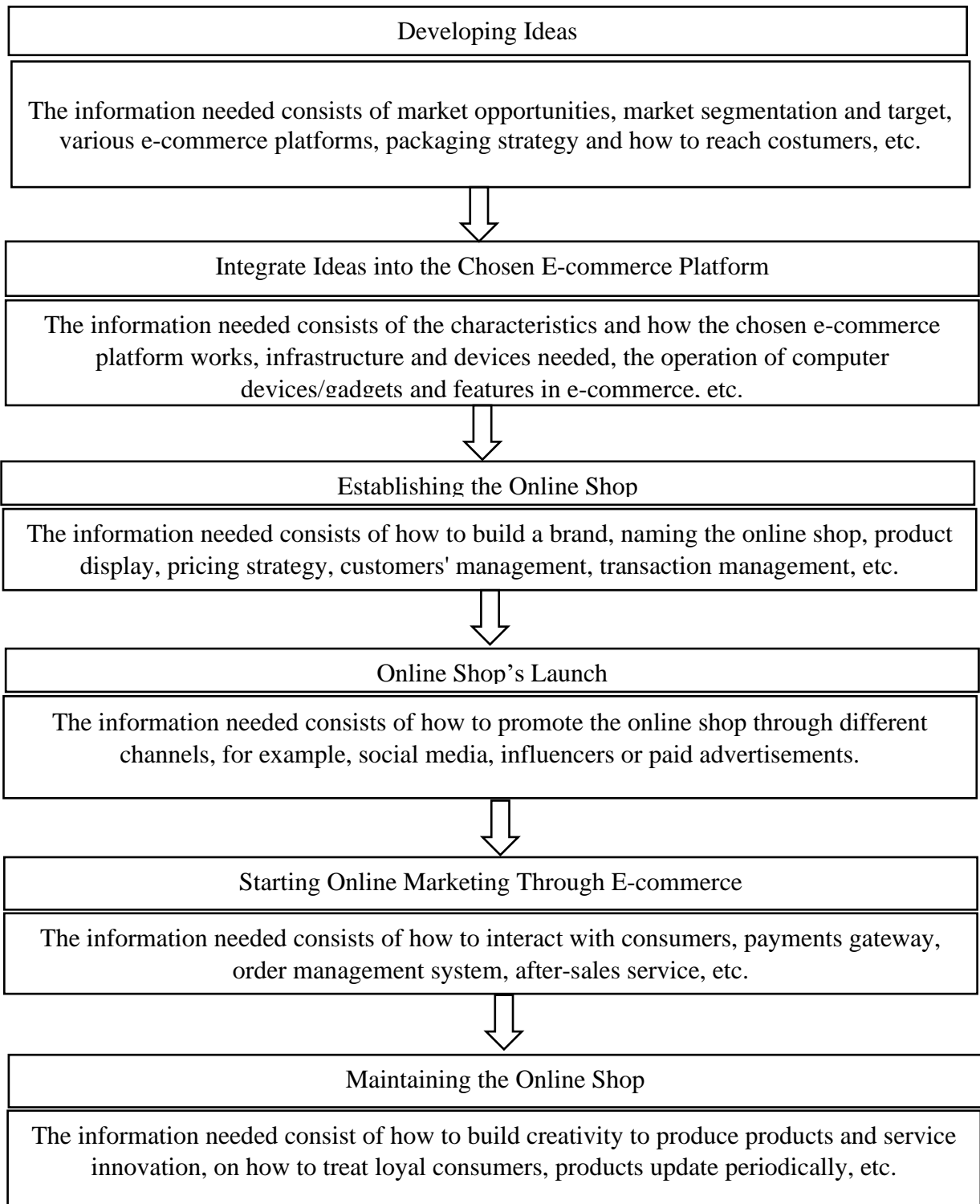


	recognize a secure online transaction system, how to prepare product's stocks to meet demands from bigger markets, etc.
Competitive Environment	Online business competition is more strict compared to conservative business. Entrepreneurs need information about the competitive environment in online business.
Competitive Advantage	To be able to compete in online business, entrepreneurs need information on how to establish an online business, how to prepare an online business infrastructure, how to use the e-commerce features optimally, how to produce high-grade products with minimal costs, etc.
Market Strategy	At this stage, entrepreneurs need information on how to set foot in the online market and attract customers. For instance the content strategy, promotion through social media, advertising and influencer, etc.
Organizational Development	In building up online SMEs, entrepreneurs need information about admins jobs, reseller/partnership system, e-commerce operation system, product delivery schedules, transaction tracking system/ customer/order management system, customer service, etc.
Management Team	Entrepreneurs need information on how to maintain a solid team in the online marketing climate.

Information Needs by Adapting the Main Components of E-Commerce Business Model  
(Traver & Laudon, 2009)

#### **4.3. Information Needs on How to Start E-Commerce**

The information needs for entrepreneurship is how they can start marketing their products through e-commerce. Information needs and stages on how to start online marketing can be seen in Figure 1.



*Figure 1. Information Needs and Steps on How to Start E-Commerce*

Figure 1 shows the information needed for rural entrepreneurs to expand their market through e-commerce. Based on observation, FGD and interview results, products that come from natural resources, such as palm sugar that came from palm trees, the production is very dependent on the harvest season. When the harvest season has passed, the main ingredients would run out and the residents could not produce any sugar until the next harvest season. Therefore, the first step of the marketing focus is for C2C (Customer to Customer) or B2C (Business to Customer) business model. Moreover, if the residents are finally able to manage basic materials on an ongoing basis and maintain the availability of the stock all the time, their marketing can be enlarged for B2B (Business to Business) business model.

## 5. Conclusion

Research shows that there are a lot of supporting factors if SMEs in Tenggalmanggung village wanted to expand their marketing through e-commerce. However, there are still some weaknesses that must be solved. From some of the weaknesses, education towards rural entrepreneurs can be a starting point for expanding their SME markets through e-commerce. Education about e-commerce can be provided based on the entrepreneurs' needs. The main needed information for entrepreneurs is how they can start marketing their products through e-commerce.

## 6. Acknowledgment

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