

## Income Recovery of Metal Craftsmen Affected by Covid 19 in Bogor District

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### ABSTRACT

Increasing cases of COVID-19 are affecting metal craftsmen in small and medium enterprises in Tarikolot Village, Bogor Regency, Indonesia. There is growing research on the use of E-Commerce platforms. But in this study, in Tarikolot Village, Bogor, there is no research on village E-Commerce in marketing products from metal craftsmen. Through in-depth interviews, this research aims to uncover this assumption. How will this situation become more productive? Where, how, to what degree and for what reasons can metalworkers affected by COVID-19 use Village E-Commerce. This research gives researchers and practitioners an idea whether E-Commerce applications can be extended to metal craftsmen or even general affected craftsmen. This research builds a web-based Village E-Commerce application architecture through a descriptive research approach by analyzing the results of questionnaires and interviews. This research uses a descriptive model with data sources being in-depth interviews and a scale of E-Commerce business usage in marketing metal products. The importance of this research is the idea of designing a website-based E-Commerce application for managing metal craftsmen products. There are about 400 more metal craftsmen and 200 more metal craftsmen affected by COVID-19. The findings illustrate to researchers and practitioners that the application of E-Commerce can be expanded to improve marketing and market expansion of village metal crafts.

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### INTRODUCTION

At the end of 2019 to early 2020, the health world was shocked by the outbreak of a virus in China that has spread throughout the world. This virus is called the corona virus which can cause dangerous diseases. On February 11, 2020, the World Health Organization (WHO) gave a special name to the disease caused by the new coronavirus, namely COVID-19 which stands for coronavirus disease 2019 [1]. WHO has designated COVID-19 as a global pandemic on March 11, 2020. This determination is based on the distribution of 118 thousand cases in 114 countries country [2]. The Indonesian government stipulated the existence of Large-Scale Social Restrictions (PSBB) in order to accelerate the handling of COVID-19 on March 31, 2020 [3]. Referring to the Minister of Health Regulation No. 9/2020 concerning PSBB Guidelines, it includes restrictions on certain activities of residents in an area suspected of being infected with COVID-19 including restrictions on the movement of people and / or goods for a certain province or district / city to prevent the spread of

COVID-19 [4]. The impact felt is very significant in various fields, one of which is the economic sector of the community being hampered, especially Micro, Small and Medium Enterprises (MSMEs) [5].

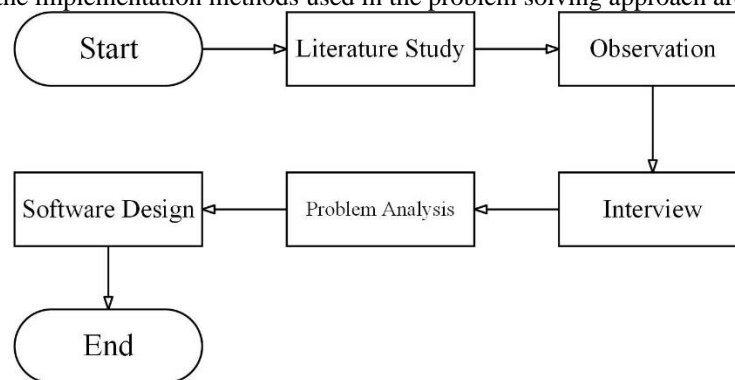
Tarikolot Village is a village located in the Citeureup District of Bogor Regency, West Java Province. The village, which is known as a metal village, has a characteristic that is considered an advantage of one of the village's potentials. There are as many as 400 metal craftsmen in the village. Among them, 50% have implemented online sales through the marketplace and 50% still implement conventional sales. Therefore, most of the local people have income from business as a metal craftsman metal craftsmen. However, in reality, it has been recorded that since the COVID-19 pandemic and the implementation of PSBB, there have been several impacts on the business activities of metal craftsmen who apply conventional types of product marketing, namely buyers coming to visit the place directly or for resale in a traditional market shop. The impact felt is the small number of customers who buy products because many supermarkets have closed as a result of a decrease in income, as well as a reduction in the number of artisan workers. Until now, the increase in the number of COVID-19 cases every day is certainly a special concern for the future.

From these problems and the PSBB policy to stay at home, it causes restrictions on activities so that this can be seen as a surge towards digitalization. The use of digital media has a positive impact, namely opening a window of opportunity for the implementation of online businesses with E-Commerce [6]. The definition of E-Commerce is a buying and selling transaction carried out via the internet using media in the form of a website [7]. The solution created is a website-based Village E-Commerce application design associated with the industrial era 4.0 where requires the availability of digital technology to support economic activity [8]. The type of E-Commerce design that will be made is B2C (Business To Consumers), which is a transaction where companies or businesses offer to sell or buy their products and services to customers [9]. Consumer interest in E-Commerce has experienced rapid growth in Southeast Asia more than doubling in the last two years. This shows that not only large companies utilize E-Commerce, but micro, small and medium-sized companies also utilize E-Commerce in marketing their products which are expected to save costs, time and energy, so as to create a selling price that can compete in the market. Thus consumers will get a low price compared to traditional purchases made manually [10]. In addition, the utilization of E-Commerce can also be said as an effort to reduce direct buying and selling interactions because through the E-Commerce system producers can offer their products or services without meeting directly with consumers. Likewise, consumers can choose and buy products without seeing them directly directly first. So that it is expected to reduce the spread of COVID-19 cases in Indonesia, especially in Bogor Regency.

**METHOD**

The method used in this research is descriptive method. Descriptive method is a method of examining the status of a group of people, an object, a set of conditions, a system of thought or a class of events in the present [11]. This method is used to describe how the phenomenon of metal craftsmen's business activities in Tarikolot Village is affected by the COVID-19 pandemic.

In this study, qualitative data collection was carried out which aims to provide an overview of the object of research. While the implementation methods used in the problem solving approach are as follows.



**Figure 1 Implementation Flowchart**

**A. Literature study**

Literature study is done by studying written materials either from books, journals, or articles on the internet in accordance with related problems.

**B. Observation**

Researchers make systematic observations and notes directly to obtain the information needed.

### C. Interview

At this stage, researchers collect information data related to parties who are considered to be able to provide the necessary information such as the Head of Tarikolot Village and several metal craftsmen in Tarikolot Village.

### D. Problem Analysis

After carrying out the previous stages, researchers identified problems which were then analyzed to find solutions tailored to user needs.

### E. Software Design

Description of solutions related to problems that have been analyzed in Tarikolot Village for metal craftsmen's businesses affected during the COVID-19 pandemic.

## RESULTS AND DISCUSSION

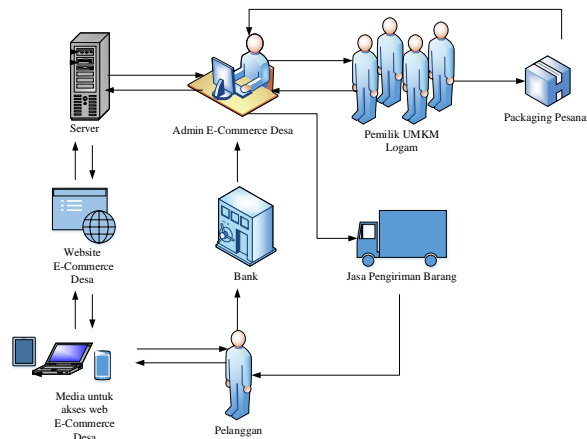
In analyzing the problem, interviews and questionnaires were conducted by metal craftsmen. Interviews were conducted to obtain data related to current business conditions, and knowledge related to the use of Information and Communication Technology devices.

From the information data obtained from interviews and filling out questionnaires, it is further simplified by obtaining conclusions, namely first, the current business conditions are on average affected during the COVID-19 pandemic, one of which is experiencing a decrease in income for metal MSMEs that are still implementing a conventional product marketing system. Second, the use of respondents' Information and Communication Technology devices in running their business to communicate product orders with buyers through the WhatsApp application. And third, information obtained from respondents that the main problem of decreased income is due to the difficulty of marketing products.

Furthermore, the researchers made a website-based Village E-Commerce application design which is presented through a business process model, system flow diagram, and interface design as follows:

#### a. System Business Process Model Design

Below is a model that can explain the actors involved in the process of running the Village E-Commerce application.

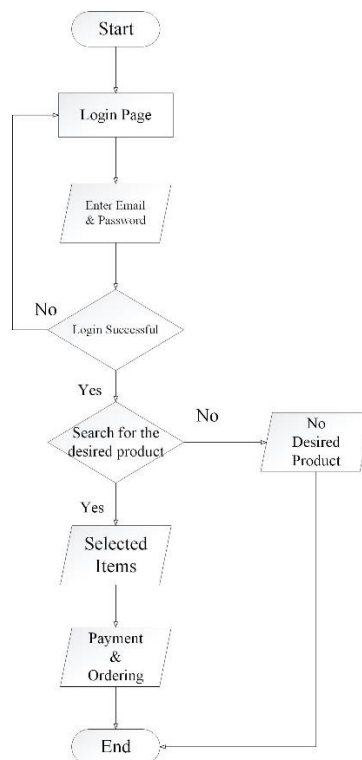


**Figure 2 Business Process Flow Model**

The initial stage of this system process is to record the owners of metal craftsmen MSMEs and their products that want to be marketed through the Village E-Commerce application. Admin which functions to manage data on metal craftsmen UMKM owners, product data, and sales data. Meanwhile, customers who want to purchase products after completing the order data make payments by transferring them through the bank. After the process is verified by the admin, the admin will send order information to the metal craftsman owner to package the product so that it can be sent to the customer's address via a delivery service.

#### b. System Flowchart Process

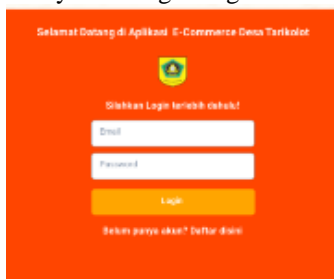
The following system flow diagram is used by metal product customers who will purchase products and already have an account through the previous registration process.



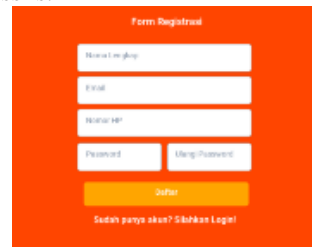
**Figure 3 System Flow Diagram**

**c. Interface Design**

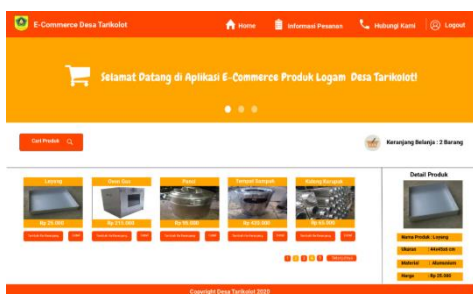
Aims to make the resulting system, program or application look more attractive and easy to understand when operated by users regarding what features and how the process is.



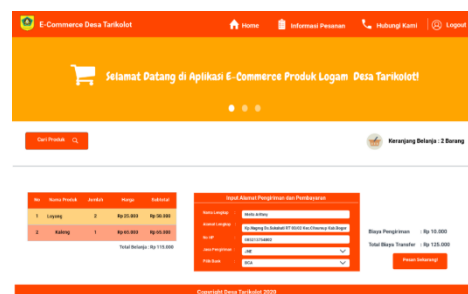
**Figure 4 Login Form Interface View**



**Figure 5 Registration Form Interface View**



**Figure 6 Product Shopping Interface**



**Figure 7 Ordering Process Interface**

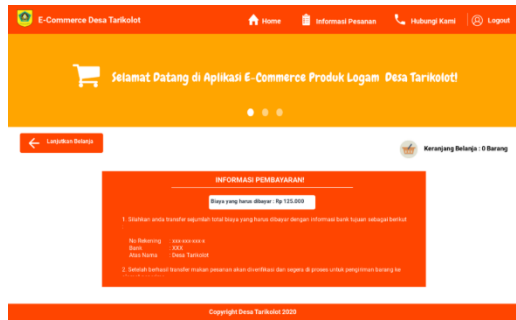


Figure 8 Payment Information Interface

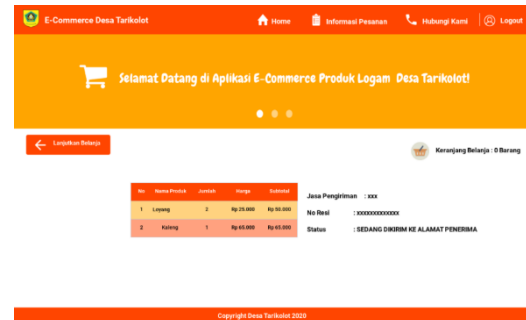


Figure 9 Order Status Information Interface

## CONCLUSION

From the results of the research conducted, it can be concluded that the Village E-Commerce design serves to determine, organize, and form components of the system solution. The analysis that has been done changes the information that has been collected during the analysis process into a model that displays the system solution.

The design of Website-based Village E-Commerce is expected to provide ideas to the village as an innovative solution used in dealing with product marketing problems of metal craftsmen in Tarikot Village affected by the coronavirus outbreak. So that the wheels of the community economy continue to run even in a COVID-19 pandemic situation.

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