

The Escalation of Iron Craft Productivity Preserves the Sustainability of Domestic Creative Industry In Indonesia

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Abstract: Iron craft is a society cultural heritage that has to be preserved. There are many factors working on the sustainability of domestic iron craft industry. This research aims to investigate those factors. The primary data were collected through the field observation, deep interviews, surveys, and documentation. The secondary data were obtained from literature reviews. Those data were deeply analyzed by qualitative method. The result of this research reveals some factors obstructing the rise of iron craft productivity which are human resources, management, and finishing. The decreasing number of labors working in this industry and the absence of potential future Iron craftsmen as well as the inadequate technology application to do the finishing process. Good management practise is required to develop the iron craft business. The values believed by the blacksmiths are family values, community values, and cultural values. The trade off of technology application replacing the labors potentially decrease the current values. On the other hand, technology is required to increase the productivity.

Keywords: Productivity, Domestic Crafts, Blacksmiths, and Industry Sustainability.

INTRODUCTION

Indonesian Bank Governor [1], In 2006 Small and medium enterprises contributed to the amount of Gross Domestic Product of Indonesia as much as 60,3% and was targeted to escalate up to 70 %. Small and medium enterprise is one of sustainable economic sectors redeeming the Indonesian economic condition during the financial crisis.

It was proven in the 1997 crisis. The small and medium enterprises stayed survive in contrast big companies were fallen down. In the developed countries, small and medium enterprises absorbed the most work forces and contributed the most to the Gross National Products growth and composition compared to the big corporations did.

Constitution number 20, 2008, small enterprise is an integral part of national economic having significant and strategic position, potency, and role to establish a strong national economic. Central Bureau of Statistics, 2017, one group of processing industry has 1-4 labors. Small and medium enterprises use human labors in the production instead of machinery.

One potency that can be developed to strengthen the society economic is iron craft industry. Iron Craft is one of micro industri in Indonesia managed by domestic industry. It is a heritage business which still exist nowadays and functions as domestic economic support. The successfulness on doing iron

craft business is determined by many factors including business management, marketing and technology [2].

Through good business management, the owners of iron craft business are able to handle production obstacles occurred. At the end it affects the business outcome. The iron craft business has to be guided to be developed independently and able to improve its role in supplying goods and service, also as a good component for the market needs, job vacancy and a significant job opportunity and to increase the domestic income of society then enlarge the businesses centre [3].

Iron craftman has to be supervised because many of them still use conventional technology hence the product quality has less selling value and limited range [4]. Iron craftsmen as the domestic economic pillar supposed to grow in line with the escalation of domestic needs. Based on the elaboration the author did this research.

LITERATURE REVIEWS

Iron Crafts

Processing industry is an economic activity transforming a raw material mechanically, chemically, or manually by hand to a ready product. Also, increasing a value of a product by transforming it including industrial service, and assembly industry [5]. Iron craft is an activity done in a iron craft workshop processing raw iron to iron equipment such as knife, hoe, *paludan* etc [6].

Affecting factors of iron craft

In general, there are two affecting factors of small industry in the village [7]:

Internal Factor

The factors related to the production, including:

- Raw Material
The sustainability of an industry depends on the availability of the raw material. Particular issues has to be aware are the characteristic of the raw material related to industry location are the source, the amount and the price of the raw material.
- Capital
Capital is an initial investment activating an industry.
- Labor
Education and skills in the industry affecting the quality and quantity of the product. The entrepreneur quality also influencing the development of small industry managed.
- Technology
Tecnology advancement and industry engineering can improve the productivity and quality of the product.
- Marketing
According to Kotler & Amstrong [8], marketing is a plan and execution of product distribution. The execution through social and managerial process in which people and groups of people aquire their needs.
- Institutional
Institutional is a platform of many production elements which are related each other.
- Financial Management
Financial management is a financial decision to alocate needs and determine the use precisely to gain the optimal return.

External Factor

The external factors are the supporting factors of the production process including external industry factor [7]:

- Regional condition
Regional condition related to the public facilities.
- Linkage
The linkage among industries including small, medium and big industries or the other activity sectors (Agriculture, trading, tourism, labors, and service education).
- Accesibility
Accesibility toward the raw material, consumer and market affecting the production process.
- Settelment Hierarchy.
Every type of industry needs different kind of supporting facilities, hence the small industries develop and grow based on the settlement hierarchy.
- Government Policy
The procedure simplicity for the entrepreneurs to conduct the production activity such as government policy related to the supply of raw material, capital, and technology. The policy to protect and help the small enterprise marketing also affects the small industry development.
- Cultural Factor.
The local culture affects the people attitude and behaviour.

RESEARCH METHODS

The population of this research was all iron craftsmen in Indonesia. The research is based on the proximity of reseacher to the location. The research data is qualitative data. The qualitative data including external dan internal factors which affecting the productivity of iron craft industry. The primary data was obtained thorough direct deep interviews with the iron craftsmen and thorough observation methode. The primary data is supported by the secondary data which is obtained from the provious related research.

The data obtained was validated with :

- Data triangulation to verify the finding from various sources.
- Data verification through academic discussion with collagues.
- Data investigation or information verification to examine the raw data.

The analysis methode used in this is descriptive analysis. This methode is used to deeply analyze the factors which affect productivity escalation of iron craft industry within Kerinci Regency.

RESULTS AND DISCUSSIONS

Iron Craft

Iron craft activity done for hundreds years is an ancestor heritage which is still done today. Iron craft is an activity processing raw iron to equipment used for agricultural activity. Iron craftman produces many products such as axes, choppers, knives, hoes and other stuff.

One of the uniqueness of iron craft is mutual benefit relation with other craftman. Taking chopper as one example, the processed chopper from iron craftman will be delivered to chopper cover craftman. Iron craftman and chopper craftman are two different businesses. Which mean iron craftman does not produce chopper with its holder and cover. The holder and the cover are made by other craftman. The economic value of the chopper will be higher if it is sold in a complete form with the holder and the cover.

Raw Material

The raw material used by the iron craftman is scrap metal. The scrap metals are collected from car spring including colt diesel truck, fuso truck, bus, taxi, and jeep. The scrap metal cost varied from Rp6.000 to Rp11.500 each kg. In the average the raw material used in a month is about 500 kg to 800 kg for each workshop. Today, the iron raw material does not experience scarcity problem. The more people leave the village, the wider network people can build to obtain the raw material and to expand the market.

The scrap metals collected, then, is burned using charcoal, the charcoal obtained from wood burning. Two kind of wood used by iron craftman are fresh wood (kayu tawar) and bulian wood. It cost about Rp40.000 for 20 kg.

Capital

The initial investment to establish new iron craft business from Rp5.000.000 to Rp7.000.000 to buy the production equipments needed. The iron craftman normally has enough money to cover their initial investment. It is not common for them to make loan in any financial institution. One third of the income is re-invested to purchase the raw material and to pay the labors.

Labor

In general, one iron craft workshop has three to four labors. The labors education background varied from elementary school graduate to high school graduate. The workers age is from 35 to 56 years old. In average, the iron craft workers have been experienced for more than 15 years in the industry. The longer they work as a blacksmith the more productive they are the better quality the product they made.

The era development and knowledge advancement have change the youth way of thinking to be involved in this industry. It can be seen that none of the labors are under 30 years old. The high school graduates prefer to persue their bachelor degree or work on other industy instead of working as an iron craftman. Hence, labor scarcity happens in particular for being an iron bouncer. Iron bouncer is significantly needed in each workshop however very limited people stay on this job.

In the average, each workshop can hire only 8-10 working days of bouncers. It is because the bouncers work for many workshops that each workshop has to wait and conform with the labor working schedule. The bouncers are not a permanent worker in a particular workshop in the order to help each workshop in their village. If they only work for one particular workshop the other workshops will not have any labors to run the business. The bouncers are paid for each 20 pieces of the products they produce ranging from Rp80.000 to Rp130.000 depend of each business owner. They approximately produce 20 to 30 products in a day.

The business owner orientation takes role in the sustainability of this industry. Innovation has to be made to generate new products or to modify the old ones with some modification. The comfort zone of the industry make the actors become less motivated to create any innovation. Market chance can actually develop by doing an innovation of the current products offered. One of the obstacles is the less innovation created.

Technology

The equipments used to produce iron products are still conventional consist of deadlock machine, hammer, printing iron, grinding adn blower. Today, there has been an improvement on the machinary such as blower replacing the conventional pump made from 2 huge paralons operated by a worker to blow the charcoal. There has been an improvement since the blower was used, particularly, in the pace of iron perfect heat and reduce the number of labors hired.

Nowadays, grinder has been used for the finishing stage to refine the final products. Some years ago, people still used manual grinder by using a file. The replacement of file to grinder has escalated the productivity. The finishing time of the product is faster with a better result. Hopefully, the labors scarcity can be solved with the existance of the machinaries thus the working schedule of each workshop will be a problem.

The quantity escalation is still able to be handled. So far, the lack of workforce scarcity will be solved by replacing them with machinaries. However, the technology application has to be adjusted to the

amount of capital the owner has to be invested and the owner preferences.

The crone technology has used to change the final appearance of the product. The use of machinaries will replace the manual labors and eliminate the existed life value, on the other hand, it helps to increase the productivity within the industry.

Marketing

In general, the marketing methode applies by the iron craftsmen is still conventional way which is mouth to mouth advertisement. Modern media has not been used yet. The craftsmen have got their own costumers. The costumers are retailers. The blacksmiths deliver the final products to the retailers or the retailers purchase the stuffs to the workshops to be resold.

The iron craft market is limited to the retailers. The market expansion can actually be done by using marketing media. However, with the current system every products they produced are sold. In the average, the iron craftsmen can sell 80 to 100 pieces of products within one or two months. Thus, marketing is not really a problem for them. If the rise of productivity is followed by the market expansion, it will increase the income.

Institutional

Village owned business (BUMDES) will be the platform for the iron craft industry. It will be operated soon to support the iron craftsmen. This village owned business will be a promotion media to sell the processed iron products. Each iron craftsmen will sell the product to this BUMDES, which then will be distributed to the costumers. Interaction platform has to be available to acquire effeciency such as in raw material supply, processing stage and sale. Today's, the iron craft is still works individually. It will be more effective when there will be a platform to support them.

Financial Management

The finance of the iron craft business depends on the product sales. In average, the iron craft can earn 20 pieces each day. The product price is varied from Rp500.000 to Rp800.000. Iron craft business a potential business if it is seen from the sales quantity. The raw material cost and the labor cost spent is about Rp355.000 and other cost is as only Rp45.000 for each 20 pieces. Hence, to produce 20 pieces of products cost as much as Rp400.000.

If the lowest prices is Rp500.000, the business owner has earn Rp100.000 for 20 pieces in a day. The lowest amount the iron craft businessman can earn in a month is Rp3.000.000. It is potentially to be developed. The bad management system obstructs the business development. Most of the iron craft business owner does not think about the future business plan yet. It is

known as one day income for one day expenditure. It means that there is no allocation used to improve the business. The financial management cannot be splitted because the owner function as the manager as well. The personal finance of the owner cannot be splitted from the business finance management. One of the solution is by doing a good book-keeping hence there will be a tracker for each financial activity.

Regional Condition

The iron craft business has owned its own costumers, hence costumers's access is not a problem. The distance to the costumers is also not a problem because it has the transportation facility. The constumers can directly get the product in the workshop. Iron craft is an ancestor heritage. Today it has been managed by the forth generation. It supposed to be preserved instead of ended in this forth generation.

One of iron craft industy village located in Jambi province. Once people entering the area, the iron craft culture has can be felt. Along the street the noise of iron processing is noticable. Iron craft business can be made as a business tourism. There are a lot of social value within the business.

The chemisty between the workers has been established well that the production process runs well. Mutual cooperation and kinship cannot be separated. Mutual cooperation is reflected from the working system of the bouncers who does not only work for one workshop, they help each other. In general, each worker prioritize the family member to work on the business. However, the new comes also take part in supporting this business.

Linkage

The linkage is a supporting activity one to another. The linkage supports the industy development. It also brings good impact to the other sectors. The value analized in the linkage is any sector which requires final product of iron craft industry. The industry development is affected by the other industry linkage.

The neighbouring Province which requires final product of iron craft due to the domination of agriculture activity as the main economic sector, hence the iron product produced is agriculture equipments. Most of the regions in Indonesia are still dominated by agriculture activity which can be reached by the iron craft industry.

The society linkage is one of the key factor of the industry development. The linkage with the small industry cannot be separated. Chopper, ax, hoe which is produced needs more process to be ready to use. This following process is linked to other industry. The choppers, hoes, axes, and knives need holder and

covers. Iron craft and the holder producers are completing each other.

Accessibility

Accessibility is a tool to measure the potency for the product travel. Accessibility is linked to the transportation. The accessible can be analyzed from market, consumer, and raw material. The access toward the raw material, the market, and the consumers have been discussed before. The access toward the raw material, the market, and the consumers are one unity.

The iron craft workshop sells the products to the market and interacting to the consumers and get the raw material from the market. Transportation supports the accessibility.

Settlement Hierarchy

Settlement hierarchy connected to the availability of the facilities. The very visible public facility is infrastructure in particular, main road. Public facility to support the sustainability of this industry has not been noticeable. Government significantly takes role in the development of this industry. The more complete the facility is the faster this industry grows.

Government Policies

The government policies including the aids to obtain raw material, capital, technology, and protection toward the industry. The government helps the iron craftsmen in the level of suggestion instead of tangible action. Government supports are required to develop and protect iron craft industry.

Cultural Factor

Iron craft industry created culture, mutual cooperation culture from this communal labors who understand each others. The culture of family members as the workers creates kinship. Culture of linkage generated when the iron products have to be process further. Mutual cooperation culture is represented from the bouncers who work helping many workshops. The villagers who go out of the village help to get the raw material and sale.

CONCLUSION

The aim of this research is to obtain empirical evident on the escalation of iron craftmem productivity preserving the sustainability of domestic industry. The iron crafts is ablet to increase the productivity however there are some particular things to be noticed. The following generation is not interested to work as a blacksmith any longer, the marketing has to be utilized, the absence of any institution operating in this industry, the finance management has to be managed, the

location with the level of cultural value, government policies are required to support the iron craft industry development with the sufficient facility.

SUGGESTIONS

Based on the conclusions, the author has some suggestions including:

- The iron craftman can use machinery to tackle the problem of labor scarcity.
- The iron craftman can apply technology to optimize the production.
- The iron craftman can do a book-keeping procedures support the financial management.
- Government attention is required to increase the ability of iron craft. The public facility provided by the government can increase the productivity of the iron craft workshop.
- The ancestor heritage is the asset which has to be preserved.

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