

Analysis of Operational Management Functions of MSMEs in Indonesia

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ABSTRACT

The purpose of this research is to analyze: a) the value of micro small and medium enterprises (MSMEs) Product “Bata Merah (Red brick), the creation of new products “Bata Merah”, and the development system that has been carried out by MSMEs actors; and b) the organizing system for the development of “Bata Merah”, and the design of processes (transformation) for making “Bata Merah”. The method used is a case study, with a qualitative approach. research conducted in MSMEs Lampung Province Indonesia. Based on the results of the analysis it can be concluded: 1) The product development system can be done by increasing the quality of raw materials, quality of the dough, and so on. 2) Organizing product development starts from organizing workforce and division of tasks according to their respective roles. The operational management function in the MSMEs has been well implemented, ranging from operational planning, operational scheduling, to operational supervision.

Keywords: “Bata Merah”, Operational management, Small business.

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Highlights of this paper

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- Based on the results of the analysis it can be concluded: 1) The product development system can be done by increasing the quality of raw materials, quality of the dough, and so on. 2) Organizing product development starts from organizing workforce and division of tasks according to their respective roles.

1. INTRODUCTION

The role of Micro, Small and Medium Enterprises (MSMEs) has been recognized by various parties as contributing significantly to the national economy. Some strategic roles of MSMEs according to [Bank Indonesia \(2012\)](#) include: (a) large numbers and are present in every economic sector; (b) absorb a lot of labor and every investment creates more employment opportunities; (c) have the ability to utilize local raw materials and produce goods and services needed by the wider community at affordable prices.

In this strategic position, MSMEs still face many problems and obstacles in implementing and developing their business activities, including: 1) management, 2) capital, 3) Technology, 4) raw materials, 5) information and marketing, 6) infrastructure, 7) bureaucracy and levies, and 8) partnerships ([Bank Indonesia, 2012](#)).

Realities that occur now, namely the number of MSMEs that grow, but are not able to survive let alone develop. The majority of their existence is like grass growing on rocks, life is reluctant, even dead don't want to. This happened, because the existing large industries were capital intensive industries with high-level information and technology (IT) based. So far, many MSMEs are managed by individual businesses and are home industry. This small business is run in a family and collaborative manner, there is no clear division of tasks between the fields of administration and operations, the low access of small industries to credit institutions, the absence of legal status ([Purwaningsih et al., 2017](#)). At present, MSMEs must compete freely with large businesses. MSMEs that are very labor intensive (all work done manually) have to deal with large businesses that are capital intensive with all machine work. Therefore, MSMEs must carry out operational management using a planning, organizing, actuating, and controlling (POAC) approach well, with the hope that efficiency will occur in all fields, so that the products produced can compete with products from large companies, both from quality (product quality), packaging quality, price, and marketing.

The dream of MSMEs to be able to compete with big companies is actually a very hard job, because both in terms of capital, technology and other aspects have already been lost. This is where the need for support from various parties starting from the government, financial institutions, communities, markets, and business partners. Support from the government, in the form of regulation making is needed in order to increase their existence. Support from financial institutions (Banks and Non-Banks) is also very necessary in order to strengthen their capital. Support from the market is also very much needed in order to expand the market network. Support from the community is also very much needed in order to increase the number of products by buying products from MSMEs. When all the parties mentioned above have provided comprehensive support, it is expected that the presence of MSMEs will be able to compete with large capital-intensive companies.

MSMEs in this study were MSMEs that produced red bricks. Red brick in Lampung, is one of the building materials that is still very popular with the community. The related substitute items are hollow bricks, Hebel, white brick, brick press, and light brick. All these substitutes are more expensive and are believed to have lower power than red bricks.

Various problems faced by red brick craftsmen (MSMEs) can be described as follows. First, the high cost of production caused by a) the high cost of raw materials (red soil and white soil) which all must buy; b) expensive fuel for running molen machines; c) even the wood used to burn; and d) high labor costs.

Second, the low price of products on the market. The main customers of SMEs making red bricks are building shops, contractors or developers, and individuals. All MSMEs in the red brick industry center in Jl. Abdul Kadir I Tangkil block, Niliki Indah, Rajabasa, Bandar Lampung set (set) the same price for the red brick they produce. This is because, because the price of the land they buy, the price of fuel, labor costs, and other costs are relatively the same, so as to maintain solidarity and solidarity between members they apply the same price.

Third, the low profits obtained by red brick MSMEs. Based on the results of interviews with craftsmen, information was obtained that every 40 thousand red bricks made for 15 days with a workforce of 4 people, only received a net profit of Rp. 2-3 million, with a capital of Rp. 8-9 million. This is because, a) there is no automation in making red bricks so that it still requires a lot of human labor assistance; b) the lack of quality control so that the quality of the red brick is not strong enough, it is proven that there are still many broken pieces, failed production, less mature in the combustion process, and non-standard size, c) high production costs, while selling prices are very competitive with other products; d) the number of bricks from outside the area of the same quality is even better, at a lower price; e) the number of substitutes with quality that is not less good than red bricks.

Fourth, the low level of welfare of MSMEs, because their income is relatively low, compared to the amount of energy that has been devoted. That was what caused the MSMEs to develop red brick.

The various steps that have been taken by the government to improve the welfare of MSMEs players are by maintaining economic stability, maintaining fuel stability, and suppressing inflation. Reading the problems above, this study intends to: a) analyze the value of red bricks, the creation of new red brick products, and the system of developing red bricks that have been carried out by MSMEs actors; and b) analyze the organizing system for developing red bricks, and design process (transformation) for making red bricks.

Based on the background of the problem as explained above, the existing problems can be formulated: 1) how is the system of red brick development carried out by MSME actors? And 2) how is the system of organizing the development of red bricks, and how is the process of making red bricks ?

2. THEORETICAL REVIEW

Operational Management is the process used by an organization to get materials and ideas for the product set, the process of transforming into a product, and the process of providing the final product for the user. Thus, operational management refers to the company's main products (Santoso, 2017).

According to Herjanto (2007) in Atmaja (2017) operations management is an activity related to the manufacture of goods, services, and combinations, through the process of transformation from production resources to the desired output. Operations Management is an activity carried out by coordinating various activities and resources to achieve a certain goal.

Meanwhile, Fogarty in Herjanto (1997) defines operations management as a process that continuously and effectively uses management functions to integrate various resources efficiently in order to achieve goals.

Sugiarti (2013) concluded that "Management management is a work program that is indispensable in an organization, because in management management the company can manage all matters of human and financial resources, where later in managing the problem, it will be shared -for each member of the manager. Therefore, management management is needed in every activity in the company, because without management management the company cannot run properly as it should ".

As revealed by Heizer and Render (2011) operations management is a series of activities that produce value in the form of goods and services by converting inputs into outputs. To create effective and efficient operational management, it can be known through the operational management functions as follows: a. Operational Planning (Operations Plan). Operational planning is divided into five categories, namely capacity planning, location, layout, quality, and production methods. b. Operational Schedule. Managers develop lists or schedules to obtain and use production resources. Scheduling shows what products will be produced, when the production process is carried out, and the resources to be used. c) Operational Control (Operations Control). Operational supervision concerning material management and quality control. Material management consists of five fields, namely transportation, warehousing, inventory, supplier selection, and purchasing raw materials for production.

Companies in carrying out operational management according to Santoso (2017) must have a scheduling regarding production namely a detailed master production schedule, detailed short-term schedule by having a machine maintenance management system, and a clear staff schedule so the company can carry out production activities smoothly. Operational supervision in the company is indicated by the delivery of goods that are fulfilled, storage of sufficient stock in warehouses, having potential suppliers, and being able to control inventory properly. The organizational structure, job description, vision and mission, and written and clear SOPs are needed by the company. Motivation, more involvement of employees, and awards also need to be considered for employees. Supporting facilities also need to be added so that the atmosphere in the company is not boring

According to Heizer and Render (2011) operational management is important for the realization of quality products with characteristics: a) in accordance with company standards, b) passing the quality control set by the company; c) there are no defective products circulating in the market, d) timeliness in production, e) ability to meet consumer demand, f) increased customer satisfaction, g) companies prioritize quality. Operational management of the company in the era of industrialization that continues to grow, demands the use of machine tools because it is closely related to product quality and to help plan, implement, and carry out company resource planning.

Based on the theory of Ebert and Ricky (2006) that operational management needs to develop a schedule to obtain and use production resources. Scheduling shows that planning (planning) of what products will be produced, when the production process is carried out, and the resources used, all have been planned well. In terms of scheduling workers, managers must be able to consider efficiency. In this regard, Ebert and Ricky (2006) also explained that quality planning must be ensured that the products produced must be in accordance with the company's quality standards. Likewise about location planning must have an impact on production costs, flexibility, and profits. In designing an operational system, managers need to be able to identify each stage of production and specific methods to do so. In planning the layout, companies should use a number of layouts (layouts), which include productive, non-productive facilities, and supporting facilities. It aims to provide safety and comfort to all stakeholders in the company and outsiders who come to the company.

Ebert and Ricky (2006) relating to operations control explain that regarding material management and quality control, material management consists of five fields, namely transportation, warehousing, purchasing, supplier selection, and inventory control. The characteristics of micro businesses are: (1) businesses run by family members, so there is no separation of household and business; (2) the scale of business is relatively small, and generally there is no record of business activities; (3) funding sources are local, labor intensive and use simple technology; (4) absence of business licenses (informal) and limited information (credit history); (5) is multi-income activities; and (6) asset value (collateral) is relatively low (unmarketable) (Munizu, 2012).

Some of the studies that have preceded this research include research that has been carried out by Werweti *et al.* (2017). They conducted research on operational management especially in the field of service and concluded that

in order to improve the quality of output in this case the quality of service needed to be carried out by operational management properly. The better the quality of operational management, the higher the level of satisfaction of the customers' goods and services and vice versa.

Likewise the results of research conducted by [Atmaja \(2017\)](#) in conducting research on operational management concluded that operational management became an important component in the company. The better the operational management of a company, the greater the chance for success.

[Kumaladewi \(2012\)](#) in conducting research on operational management especially in human resource management explains that in managing business activities requires employees who are disciplined and responsible in working on and carrying out their work in accordance with regulations set by the company.

[Puspita \(2013\)](#) examines operational management, especially in customer service, which concludes that the factors that influence customers to use products are the speed and accuracy of service performance. The workings and work stages of the employees are one of the quality services that are often the customer's attention.

The results of [Santoso \(2017\)](#) study concluded that, operational management carried out by companies should not have demand capacity and companies only produce products of the quality that are in accordance with buyer demand. In operational management, especially in site selection, it is also concluded that the location of the company should be strategic so that it is easily accessible to suppliers and workers. The company's layout should pay attention to employee safety and security. In making products, it should be of good quality and difficult to emulate competitors, using clear production methods.

3. RESEARCH METHODS

The research method used in this study is qualitative research with a case approach. In case studies, you will get casuistic data in depth so you can understand the reality of the field as it is. The advantage of case research is that it is able to describe the situation and condition of the research case, thoroughly, until it can be used as a morning reference for other parties who want to follow, modify, or improve the conditions and situation of the case according to their abilities.

This research was carried out at the MSMEs making the Red Brick Belonging to Mr Parna which is located at Jl. Abdul Kadir I Blok Tangkil, Niliki Indah, Bandar Lampung City. The location of the study was chosen because: 1) the location of the MSMEs is easy to access, 2) the existence of these MSMEs is in the middle of similar MSME centers, 3) close to urban centers, 4) travel time only 5-10 minutes from the city center, 5) very feasible to study, because it is already 20 years old, and the MSMEs still exist, 6) have products that are still very much needed by the community, 7) even though they are labor intensive but have used the touch of molen printing machine with red brick printing, 8) with the number of workers is 4 people capable of producing red bricks between 3000-5000 sticks per day

The study was conducted between April 16 until May 5, 2018. In this study the types of data needed include primary and secondary data. Primary data is data obtained directly without the intermediary of another person or institution as a third party. This primary data was obtained by conducting interviews with respondents in this matter to Mr. Parna as leader, Mrs. Wagiyah, Mr. Sutaryanto, and Suparman. The types of primary data extracted in this study are: 1) red brick function, and red brick life stages; and 2) red brick value, creation of new red brick products, and red brick development systems that have been carried out by MSMEs actors; and 3) the organizing system for the development of red bricks, and how to process (transform) the making of red bricks. Skuncer data in this study includes data sourced from literature, similar research scientific journals, and other data related to the theme of this research such as data sourced from the Lampung Province Central Statistics Agency (BPS).

Key informants in this study were: 1) Mr. Parna as leader, 2) Mrs. Wagiyah (wife of Mr. Parna concurrently as a Worker), 3) Mr. Sutaryanto (worker), and 4) Suparman (worker). Supporting informants came from truck drivers who delivered raw materials, buyers, wood suppliers, and neighbors who were both MSMEs. To obtain and collect data that fits the needs of this study, the techniques used are participatory observation and in-depth interview.

The analytical methods used are: first, descriptive analysis. This analysis is used to clearly describe the characteristics of the research data. Explanatory descriptive analysis is to explain or describe concepts or a combination of several concepts in detail (Singarimbun and Effendi, 1989). Whereas according to Faisal (1992) explanatory descriptive analysis is intended to explain the reality in the field to be able to produce a large conclusion and able to contribute to theoretical thinking so that the results can explain something certain symptoms or social realities occur.

Second, qualitative analysis, with three stages of activity, starting from data collection, reduction or data filtering, data classification, and conclusion (Miles et al., 2008). Data reduction means summarizing, choosing the main things, focusing on the important things, looking for themes and patterns. Thus, the reduced data will provide a clearer picture, making it easier for researchers to carry out further data collection, and look for it if needed (Sugiyono, 2011).

4. RESEARCH RESULT

4.1. General Description Of MSMEs "Red Brick" in Lampung, Indonesia

Mr. Parna's Red Brick MSMEs are micro-enterprises because there are only 4 employees, with 80,000 red brick products per month. This company was established in 1998. The company was founded by Mr. Posman Manurung who collaborated with Mr. Parna to run his business. This company since 1998 has rented a place on Jl. Abdul Kadir I Blok Tangkil, Niliki Indah, Bandar Lampung City. The location that was leased initially was an abandoned tangkil plantation, with an area of 8,000 m² (0.8 ha), which was divided into 5 red brick UMKMs, each group occupying an area between 800–2,000 m².

These MSMEs happen to get land rent with an area of 800m². The price of leasing an area of 800 m² in 1998 was only Rp. 2000,000 (two million rupiah), but now it rises to Rp. 2,500,000.00 (Two million five hundred thousand rupiahs). The boiling of the land can be tabulated as follows Table 1.

Table-1. Allocation of company area allocation.

No	Allotment	Length (m ²)	Width (m ²)	Area (m ²)
1	Houses for burning	8	8	64
2	Printing machine placement location	5	5	25
3	Location of stacking red and white soil	6	10	60
4	The location of the rest house and MCK	5	10	50
5	Drying Location	25	20	500
6	Location of burning wood pile	10	10	100
Total				799

Source: Measurement results in the study location April 17, 2018.

Before starting the business, Mr. Manurung made various preparations such as establishing huts for 5 x 10 m guards with semi-permanent conditions, equipped with bathrooms, wells, electrical installations, terraces to receive guests, and houses for burning red brick with roofs. zinc and asbestos.

Mr. Manurung, assisted by Mr. Parna, also prepared a variety of facilities needed such as a place for stirring land, a brick molding place, a drying place, a wood piling place so it would not rain, and cut various grasses so that there were no dangerous creeping animals.

Parman invited his wife Ms. Wakijah, and two of her siblings to work on making red bricks. Mr. Parna was given capital by Mr. Manurung to make bricks with a profit sharing system (60% for capital owners and 40 percent for implementers in the field). Working days are used Monday to Saturday, while Sundays are off for production. It's just that on Sundays you can still enter work, especially during the combustion process. In these conditions, they are considered overtime.

The production process at the first time is made by using manual, all stages of work using human power starting from mixing the soil, stirring the soil, printing, cutting, drying, arranging for the combustion process, until the product is demolished. The red brick ukuran at the beginning of production is 10 x 20 x 5 cm, but now it shrinks to 7 x 14 x 3.6 cm. The depreciation process (reduction in size) is related to the high cost of raw materials, market demand, and the low price of goods. At present, the Red Brick UMKMs Parna has a variety of working partners both as suppliers and as customers who, if described, look as follows [Figure 1](#).

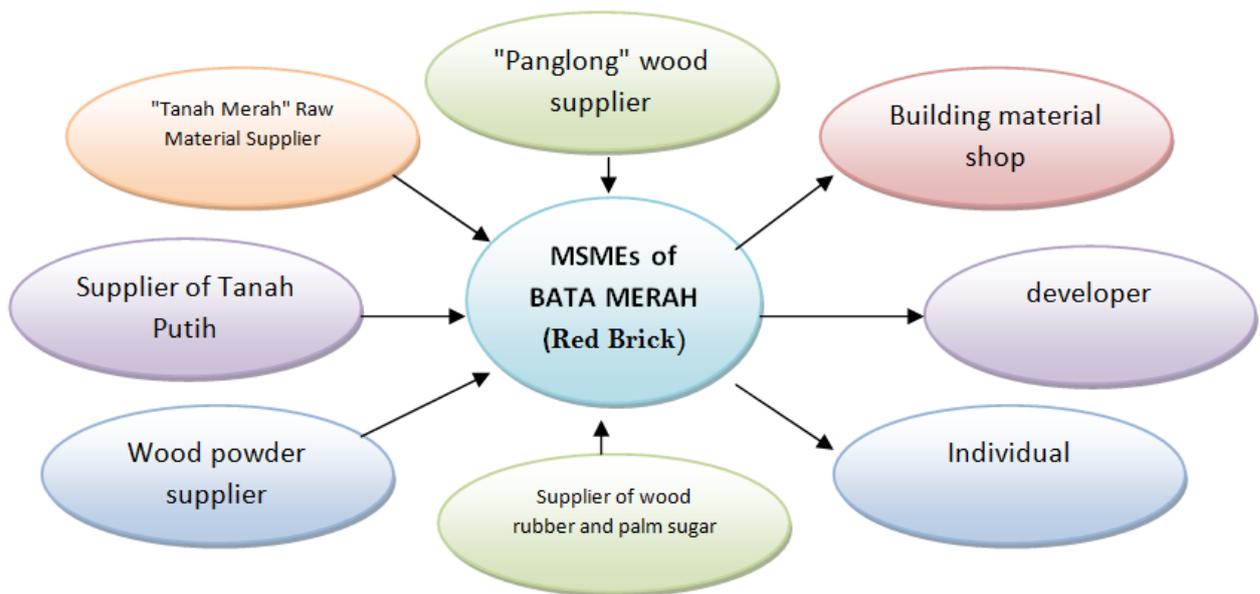


Figure-1. MSME of Red Brick and Partners.

Description: The arrow shows the direction of the item.

4.2. Red Brick Products

Red brick is a brick that originates from red soil which is printed using both hands and using a machine through burning with very high temperatures, and is one of the building materials that is still in great demand by the public. Red brick can also be understood as one of the main materials in the process of building a building or other type of building, which comes from the land that has been printed and has been burned at very high temperatures, so that its form has changed from clay to red brick with infinite product life .

Red brick is clay brick that is printed either manually or machine dried using solar heat, which is then burned to change the shape and color of black soil to brick red which can be used for various development needs, starting the construction of buildings, houses, etc., with prices that are relatively affordable, but have undoubted strength, with an unlimited service life.

This red brick has various advantages, among others: 1) can be made either manually or by using a machine, 2) the manufacturing process is very easy, does not require special skills, 3) the products are in great demand by the community, 4) prices are relatively cheap so it is very affordable all layers of society's economy, 5) raw materials are

relatively easy to obtain, 6) the age of the product is very durable, even centuries if properly burned, and 7) if it has become a building, it has very strong strength.

The disadvantages include: 1) if it is not perfectly burned, then the level of satisfaction is less complete, so that the strength is less solid, 2) if the clay mixture is not good, it will break easily, 3) if the land used is fertile soil, then can be said to be less environmentally friendly, and 4) prices are relatively low so that the level of profits for producers is low.

Red brick has many functions, because the substitution is relatively small, and red brick substitution has a price that is relatively more expensive than the red brick itself. The function of red bricks can be identified as building materials: houses, fences, water absorption buildings, feces storage buildings, parks, restaurant ornaments to impress artistically, dams; and various other types of buildings.

The stages of product life, red bricks can be said to be very long. Red brick that is burned with maximum heat will produce a good red brick. This red brick can last for hundreds of years. Evidently many ancient temples inherited from the ancestors are still intact arranged neatly. The red brick will last longer when it is laid (closed) with mortar. Old houses and buildings that were built in the Dutch colonial era, although the building was damaged but if carefully dismantled, the red eye used as the main building material was still intact. Thus, it can be concluded that the life stages of red stone products can be expressed for very long.

Red brick that is not perfectly burned and not coated with mortar, the age of the red brick will not be too long. The red brick will wear out or weather it because it is exposed to the heat of the sun, rain water, and various collisions with other items.

4.3. Product Analysis Based on Product Value

The red brick products made by MSMEs are one of the building material products that are manually worked with the help of machines when stirring and printing, but the majority of other jobs, from stirring the soil, putting soil into molen, cutting the red brick bars into red brick according the desired size, drying the red brick, arranging it to the kiln, by dismantling and loading the red brick into the vehicle, all done manually.

Looking at the amount of work that still needs to be done with people (manual) it will have implications for the small number of products, the high cost of labor, and the quality that cannot compete with similar products that are more technology-based, because of the very low cost of production while on the other hand the price of the product is relatively low.

Product prices can be said to be relatively very stable, because the price of raw materials in the form of red soil and white land is relatively fixed, fuel prices are also relatively stable, fuelwood prices start from rubber wood, cash friction remaining, and palm sugar is relatively fixed, and waste energy work can also be said to be relatively fixed. Therefore, the price of red brick is relatively stable, because the prices of supporting goods for the manufacture of these products are all relatively stable. The price of red bricks will rise when the price of fuel rises, so the cost of production rises, and land prices also increase due to the increase in fuel for the car carrying the land.

Product value analysis can be seen in the cost analysis table by calculating all costs incurred by MSMEs as follows [Table 2](#).

Table-2. Analysis of costs and profit / loss for making red brick 40 thousand (1 package).

Raw materials to produce 40 thousand red bricks					
No	Raw material	Volume	@ (Rp)	Total (Rp)	
1	White soil	2 truck	450.000	900.000	
2	Red Land	8 truck	250.000	2.000.000	
3	Wood powder	2 m ³	50.000	100.000	
4	Water	10 m ³	5.000	50.000	
5	Solar	40 liter	6.000	240.000	
6	Rubber wood	1 minitruck	250.000	250.000	
7	The remaining scraps of wood	4 minitruck	180.000	720.000	
8	Palm wood	0,5 truck	180.000	90.000	
Sub total				4.350.000	
Labor wages to produce 40 thousand red bricks					
No					
1	Parna (leader)	15 Day	60.000	900.000	
2	Wagiman	15 Day	60.000	900.000	
3	Sutaryanto	15 Day	60.000	900.000	
4	Wakijah	15 Day	50.000	750.000	
Sub total				3.450.000	
Miscellaneous expense					
	Cost of Rent Places	0,5/12 Year	2.500.000	104.167	
	Electricity cost	0.5 month	200.000	100.000	
	Tool maintenance	1 service	200.000	200.000	
	Worker's cigarette	15 Day	40.000	600.000	
	Unloading costs	40 thousand	5.000	200.000	
Sub total				1.204.167	
TOTAL				10.004.167	
Revenue from sales of 40.000 bricks					
1	Price	40 ribu	280000	11.200.000	
Net Profit				2.195.833	

Source: Results of 2018 Data Analysis.

Based on the table above, the value of each unit of red brick can be calculated as follows [Table 3](#).

Table-3. Calculation of product values for one product unit.

No	Description	Price (Rp)
1	Total cost	9.004.167
2	The amount of red brick produced	40.000
3	Price of red brick unit	225,1

Source: Results of the 2018 analysis.

4.4. Product Development System

For the creation of new products, the facilities and equipment needed can be identified as follows. The following are various facilities needed to produce red bricks, namely: a) houses for burning; b) facilities for placement of printing machines; 3) means of stacking red and white soil, c) houses of rest and MCK, d) drying facilities, and e) facilities for burning wood.

The equipment needed to make red bricks includes: red brick printing machines (diesel engines, molen, and cutting tools into one unit), orong carts, plastic rain covers, water buckets, solar diligen, water hose, hoes, rags / cleaning cloth cutting tools, stairs to arrange, high tables for red brick arrangement, and various tables and seating for rest and supervision purposes. Meanwhile, the system for developing red brick products can be described as follows.

First, at the beginning of production, the size of red brick is 10 cm x 20 cm x 5 cm. This means that the red brick has a width of 10cm, a length of 20cm, and a thickness of 5cm. Second, based on the results of the survey in

the field, discussions with developers, and surveys with other MSMEs which together produce red bricks, it was found that the size most desired by consumers was 7cm x 14cm x 3.6cm. That is, the red brick has a width of 7 cm, a length of 14 cm, and a thickness of 3.6 cm. This size is smaller than the previous size.

Thus, the product is developed based on market needs or consumer demand which has been using the red brick produced by the UMKM. However, red brick products developed by MSMEs from time to time have never experienced significant developments. The quality of red bricks, from time to time, actually decreases in terms of quality, size, and level of maturity Table 4.

Table-4. Quality of red bricks from time to time.

Era / era	Wide	long	Thick	Maturity Level	Color	Level of strength
Dutch era	12-15	24-30	5-7	Very mature	Blackish red	Very strong and durable
Era before 2000	10-12	20-24	4-5	Mature-until very mature	Dark red	Strong
Current era	7-10	14-20	3-4	Mature	Pink	Not strong enough

Source: Results of interview with P Parna (key informant / speaker).

Organizing product development starts from organizing the workforce and division of tasks according to their respective roles Table 5.

Table-5. Description of the division of tasks for each worker.

No	Name	Main tasks	Additional assignments
1	Parna (leader)	Leading the production process, buying and preparing red and white soil, preparing wood burning,	helps stir the soil, helps to put soil into molen, helps burn
2	Wagiman	Stir the soil, put soil into molen,	help the brick house in the burning house, help burn
3	Sutaryanto	Cutting brick molds, arranging bricks to carts, drying bricks, lifting dry bricks to the kiln,	help the brick house in the burning house, help burn
4	Wakijah	Cooking, making drinks, buying snacks for workers, paying workers, buying diesel, taking water for mixtures,	help arrange the brick to the drying place, help lift the brick to the kiln,

Source: Results of interviews and participatory observations.

The second organizer was organizing land suppliers, sawdust, burning wood, building materials sellers, contractors, and small pre-development, including individual buyers.

4.5. Implementation of the Transformation Process and Production Process

The raw materials used for making red brick include: Red soil, white soil, and water. There are auxiliary materials for the process of making red bricks, including: Wood powder between wet brick coatings, Solar (diesel engine fuel for mole), Burning wood (Rubber wood, Wood friction remnants, Palm wood).

The process of managing raw materials is carried out by, among other things: a) Maintaining the quality of raw materials so that they are not too rough so that it is easy to mix red soil and white soil, b) Selecting raw materials that do not contain rocks, wood or grass, and c) Choose raw materials with little sand content, so that the strength of the red brick becomes perfect not easily broken.

The implementation of the production process can be described sequentially as follows.

1. Red soil and white soil in dry or wet conditions are mixed manually using a hoe with a ratio of 1: 4 (1 part white soil and 4 red soil)

2. if the mixture is evenly distributed, add enough water so that the soil can be ground with molen (printing machine)
3. the preparation process by checking the condition of the engine, the volume of fuel, and heating the engine by turning on the molen brick molding machine (when the engine has sounded, the production process is ready to start)
4. Enter the soil that is ready to be printed little by little using a hoe.
5. red brick prints that are still in the form of bars come out of the modern machine, then cut with a cutting tool
6. Transfer the wet red brick that has been cut to the cart that will be used to transport it from the production site to the drying location. In order for red bricks not to stick together (sticky) then the red brick is sprinkled with wood powder.
7. Dry the red brick under the hot sun to dry between 10-15 days.
8. After the brick is dry, then arrange it in the form of a phallus like a temple with holes that have been prepared for tidying.
9. Burn the red brick that has been compiled earlier with wood for 2 x 24 hours and let the fire stay on until the fire goes out on its own
10. Cool the stack of red brick that has been burned for 2 x 24 hours
11. Demolition from the kiln
12. Red brick is ready to be distributed and marketed.

All steps or stages, if described, appear as follows [Figure 2](#).

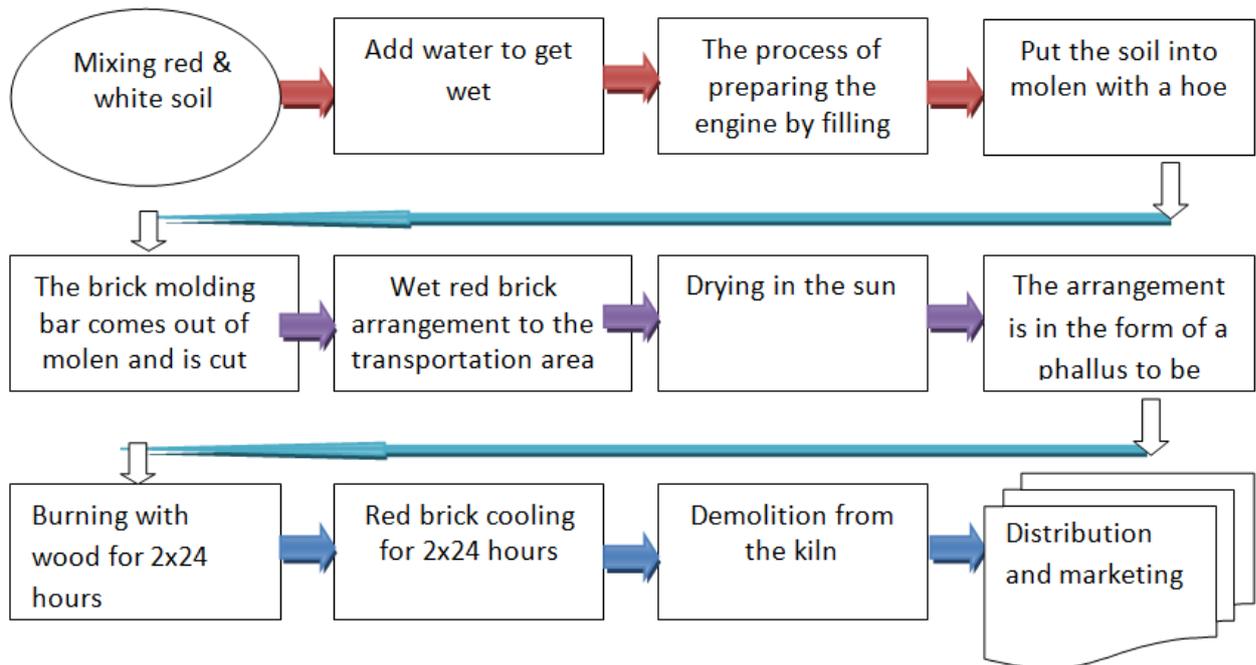


Figure-2. The process of red brick production flow.

Source: Results of interview with P Parna (key informant / speaker).

The red brick that has been burned will be directly marketed to customers which include: Permanent Customers (Shop buildings, Contractors who have routinely bought) Non-permanent customers (Individuals who need, Small scale contractors who do not routinely buy). Prices for fixed and non-permanent customers are no different.

5. CONCLUSION

Based on the results of the analysis it can be concluded:

1. Analysis of the value of red brick products for sizes 7 x 14 x 3, which is worth Rp. 225.10 with a sale value of Rp. 280.00, so that each red brick bar gets a profit of Rp. 54.90. The process design (transformation) of making red bricks starts with stirring the raw material ie red soil and white soil mixed with size 4: 1, plus enough water, then stirring, put into molen machine, red brick still in the shape of the bar cut accordingly size, sun-dried, burnt, cooled and red brick ready for sale.
2. The red brick product development system can be done by improving the quality of raw materials, quality of dough, and so on. The quality of the company's products has similarities with similar MSMEs products so there is no uniqueness or difference with other producers so that there is no competition in the scope of the red brick industry center. The production method in the company is not efficient because it does not yet have clear standards. In terms of operational supervision, the company has good quality control, which has good QC (quality control). The red brick cutter and the red brick taker produced together carry out quality control. The defective red brick is immediately put back into the molen hole to be immediately ground again. MSMEs also control the quality of semi-finished goods and finished goods
3. Organizing product development starts from organizing workforce and division of tasks according to their respective roles. The operational management function in the Red Brick MSMEs has been well implemented, ranging from operational planning, operational scheduling, to operational supervision. The location of the company can be said to be strategic and its location can be reached by building shop cars that will take products, supplier cars, and labor. The layout of the company has not paid attention to comfort and safety for the company's stakeholders. MSMEs have an organizational structure but are not formally represented, so the job description and SOP in writing are also not owned. MSMEs do not have a clear vision and mission, so they seem to be just running a business without wanting to develop their business to become a big company.

6. SUGGESTIONS

Based on the above conclusions, it can be suggested: 1) MSMEs can create organizational structures and job descriptions in real terms, make good standard operating procedures, and plan product development properly so that they can compete with other capital intensive companies; 2) MSMEs in conducting business should not only be oriented towards fulfilling their needs, but must be oriented towards developing the company, increasing the number of workers, and increasing the technology used.

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