

Design Model Development Of Madura Herbal Medicine Industry

Millatul Ulyya, Khoirul Hidayat, M. Fuad FM

Department of Agroindustrial Technology

Trunojoyo University, Indonesia

millatul.utm@gmail.com, irul_ie@yahoo.co.id, mfuadfm@gmail.com

Abstract

Madura herbal medicine industry is the Micro, Small and Medium Enterprises (SMEs) which has been run for generations by the ancestors of the people of Madura and has evolved over time. Based on data from the Department of Industry and Trade in 2016 that there is 47 herbal medicine industry in Madura with the magnitude of the regions, 15 are in Bangkalan, 3 were in Sampang, 22 were in Pamekasan, and Sumenep 7 are in. Community economic development through SMEs is essential considering its primacy as the lifeblood of a national economy. In 2016 Asean Economic Community (AEC) began to be applied, so that competition in the trade of ASEAN countries is very strict. Hence the need for research on the design of models of the development of Madura herbal medicine industry. This research uses a descriptive design that aims to describe aspects that are relevant to Madura herbal medicine industry. The results of this study, there are three sub-models, namely the development of herbal industry Madura; (1) Design Sub Management Model that includes a database of herbal medicine industry, organizational structure, job description of labor, (2) Design Sub Production Model which includes the production technology, product standardization, product packaging design (3) Design Sub Marketing Model that includes pricing standardization, utilization of information technology, cooperation with distributors and local governments. So hopefully with their reviews, their three draft sub models will assist in the development of Madura herbal medicine industry.

Keywords : SMEs, Madura Herbal Medicine Industry, Sub Model.

1. Introduction

Madura is one area in East Java has a wide range of local advantages, one advantage of a locally owned Madura Madura island is herbal, Madura batik, handicraft sickles, etc. other (Hidayat and Herlambang, 2009). Jamu Madura itself has been known throughout the country, even according Madura medicinal product is a product that most consumers on the east dominate Indonesian production held in Pakuwon City Surabaya. It indicates that the herbal medicine Madura Madura is a typical product that should be familiar to the public (Mutmainnah, 2009).

One of the potentials of the local economy in Bangkalan regency which has a potential for the new job opening is a small industry of traditional Madurese traditional herbal medicine (Mu'tamar, 2019). The market share of medicinal herbs is very high, it is based on mutmainnah research that Madura women drink a lot of herbal medicine from men, drink herbal medicine done by Madura society since adolescence, there is linkage between drinking herbal medicine with woman role in public sector, useful for health in doing work activities (Mutmainnah, 2009). Governance of government guidance on the performance of Small and Medium Enterprise (SME) shows that coaching conducted by the government through the provision of bank credit was not necessarily can improve performance but even degrade performance (Prasnowo, Khomaruddin and Hidayat, 2017).

Likewise, the formal and centralized pattern of entrepreneurship education proved unable to improve the performance of SMEs in Madura. Formulation of some operational policies that need to get the attention of the government, especially strengthening in the specific business specificities of local culture. The pattern of cooperation with State-Owned Enterprises with the pattern of pure business may be an alternative to government coaching by sticking to the culture of Madurese society (Rachmad Hidayat, 2009). Therefore, there is a need for

follow-up activities that integrate institutions related to entrepreneurship development as well as research programs that focus on the small herbal industry (Mustajib *et al.*, 2010). Madura herbal medicine industry is the Micro, Small and Medium Enterprises (SMEs) the which has been run for generations by the ancestors of the people of Madura and has evolved over time (Mustajib *et al.*, 2010)(Akhir, 2009).

Based on the data from the Department of Industry and Trade in 2016 that 'there is 47 herbal medicine industry in Madura with the magnitude of the regions, 15 are in Bangkalan, 3 were in Sampang, 22 were in Pamekasan, and Sumenep 7 are in (Biro Pusat Statistik, 2017a, 2017b, 2017c). Community economic development is essential considering the SMEs through its primacy as the lifeblood of a national economy. In 2016 the ASEAN Economic Community (AEC) Began to be applied, so that competition in the trade of ASEAN countries is very strict (Adriansyah *et al.*, 2017). Hence the need for research on the design of models of the development of Madura herbal medicine industry.

Research related to marketing strategy in an industry has been done a lot. Some of them are conducted by Nurhasanah under the title "Marketing Strategy Formulation Through Priority Trapezoidal Fuzzy Number, Traditional Beverage Case Study Case", which analyzes the traditional beverage industry to develop the business by using the company's environmental analysis to find out the strengths, weaknesses, threats and current opportunities first before formulating what strategy will be used to get the marketing strategy.

The use of IFE, EFE, SWOT and QSPM matrices is widely used to analyze problems. Wahyuningsih entitled "Marketing Strategy Analysis of Small Industry of Milk Muscle Candies in West Java Canning Area", which performs a qualitative analysis of SWOT complete with its matrix to get SO, WO, ST and WT strategies as input for candy industry concerned (Wahyuningsih, 2004). Kusnandar Research entitled "Design of Institutional Model of Organic Rice Agribusiness in Supporting Food Security" which designed the institutional model of organic rice agro-business. The data collected includes primary data and secondary data. Data analysis includes system analysis, institutional analysis, and interactive analysis. The result of the analysis shows that organic rice agribusiness system in Sragen regency is supported by strong superstructure that is central government policy in the form of Go Organ program 2010 and local government policy in the form of cultivation, counseling, marketing, and certification. The profile of the organic rice agribusiness community includes farmers, farmer groups, farmer groups, extension workers, organic rice farmers associations, organic rice agroindustry companies, governments, and consumers (Padmaningrum, Rahayu and Wibowo, 2013)

2. Methodology

This study used a descriptive design. Interest descriptive study design as described was to describe aspects of a phenomenon relevant learned researchers of an individual, organization, industry, or other perspectives (Pembangunan, 2013). Thus descriptive study presents data in the form of a very meaningful so it helps to understand the characteristics of a group, to help in thinking systematically about aspects in certain circumstances, provide ideas for further search and research, and assist in decision making.

In this case, the context of our study was madura herbal medicine industry (David, 2011). The data collected is quantitative and qualitative related to Madura herbal medicine industry profile that includes aspect management, production, and marketing. In the management, aspect includes organizational structure, administrative, financial, and environmental of madura herbal medicine industry. In the aspect of production including labor, raw materials, production processes, product quality, and Technology. While the marketing aspects including product, distribution, promotion, and price.

Data collection techniques are structured interviews, in-depth interviews and focus group discussions (FGD) to obtain primary data. Structured interviews intended to obtain quantitative data, Madura Medicine Industry profile, industry developments, and perceptions about madura herbal medicine industry. While the in-depth interviews and FGD for the purpose of obtaining the data/information in detail about madura herbal medicine industry. FGD will involve the government (such as Department of Industry and Trade-related agencies, cooperatives, and SMEs) to obtain information about the relevant policies Medicine Industry Madura; and consumers to obtain information about consumer behavior in purchasing Medicine Industry Madura (Penelitian *et al.*, 2003)(Pudjadi and Tommy, 2007).

3. Results And Disussion

Herbal medicine is an original ingredient in natural ingredients used for health maintenance, disease prevention, disease treatment, health restoration, fitness, and beauty. Herbs are made from natural materials, in the form of parts of plants such as rhizomes (roots), leaves, bark, and fruit. There is also the use of materials from animal bodies, such as goat bile or crocodile. Raw materials of this natural medicine can be derived from biotic and abiotic natural resources. Biotic resources include microorganisms, flora, and fauna as well as marine biota, while abiotic resources include land, water, and space resources and include the wealth/potential within it.

According to the Ministry of Health of the Republic of Indonesia, the definition of herbal medicine is a traditional medicine whose raw materials come from nature (plants and animals) and most have not been standardized and have not been studied, these materials have traditionally been used for treatment because they have properties to heal. The basic ingredients of herbal medicine are derived from plants both from roots, leaves, fruits, flowers, and skin. The herbal form is a very diverse form of chopped, powder, pills, capsules, tablets, liquid medicine outside, ointment or cream. Herbal medicine can be interpreted as an ingredient of various natural ingredients and a simple way of processing so as to produce a product that efficacious or cure the disease. Herbal medicine industry is an industry engaged in the processing of herbal medicine, in the production process herbal medicine industry using machinery and equipment that are quite simple and the workforce still has a relationship with the owner of the industry.

In the year 1900, there are many emerging herbal industry in Indonesia. They mix herbs with quality and hygienic ingredients that can overcome various diseases by using five superior plants, such as *Centella Asiatica*, *Curcuma xanthorrhoea roxb*, *Andrographis paniculataburms*. f-ness, *Kaempferia galangal*, Linn.) and *Zingiber Officinale roxb*. Herbs that circulate in the market can be classified into 6 (six) large groups, namely strong herbs, herbal medicine for femininity, herbal body or beauty treatments, herbal rejects wind and other herbs. The function of the various herbs are as follows: (1) Strong and healthy herbs man is a herbal medicine that serves to maintain body health and increase the vitality of men, (2) Herbal medicine for femininity is a herbal medicine whose use is intended for feminine areas, including herbal menstruation, herbs for whitish, and herbal fragrant.

In this group include the herbalist out of delivery, (3) Herbal body or beauty treatments are herbal medicine that serves to keep the body to stay healthy and fresh, also treat and keep skin to stay healthy, smooth, clean, soft and fresh. In this group also includes herbs that are useful for slimming and herbs to get rid of acne, (4) Herbal reject the wind is a herbal medicine that serves to cure symptoms of colds like stomach bloating, nausea, dizziness, lethargy, and cold hot body, (5) *Jamu pegel linu* is a herbal medicine that serves to relieve symptoms of sickness in the body, pain in joints, and (6) Other herbs, in this group are various types of herbs that do not belong in the above groups, such as medicinal herbs (cough, asthma, bladder stomach, ulcers, rheumatism, high blood) and non medicinal herbs (added blood, smoothing asi, herbal medicine for children).

Indonesia has considerable biodiversity, estimated to have around 40,000 plant species, of which 30,000 species live in the Indonesian archipelago. Among the 30,000 species of plants that live in the Indonesian archipelago, it is known that at least 9,600 species of medicinal plants as medicinal and approximately 300 species have been used as traditional medicine or herbal medicine by the traditional medicine industry. Utilization of raw materials of traditional medicine or herbal medicine by the community reaches approximately 1,000 species, of which 74% of them are wild plants that live in the forest. The biodiversity of medicinal plants owned by Indonesia is a potential resource to be utilized and developed as raw material for medicine.

In Indonesia, there are several types of plants that have the potential to be developed into traditional medicine. Types of plants such as guava, chili Java, red ginger, turmeric, and greetings. This plant is a major medicinal plant that is being developed by the government that is Indonesia National Agency of Drug and Food Control (NA-DFC) in cooperation with various universities and clinicians. Plants are continuously developed so that will be obtained traditional drug quality, efficacious, and safe to use and can be justified scientifically and can be used to improve public health.

Sampang District there are also makers and herbal merchants are similar to this Javanese herbal medicine. They also sell herbs that are also directly drunk. Based on information and data from some informants, Maduran herbal medicine has been there since the ancestors who have fallen down. Some even since 1908 have started making herbs Madurese herbs. This shows that Madurese herbal medicine has been known for a long time. The famous Madura

herbal medicine herb has a rich cultural background, especially since the original purpose of its use is to foster a household, place of husband and wife along with their offspring children have the same rights and obligations.

The reason for the underlying wisdom is generally imposed directly or casually by a mother, or bridal makeup, or a trusted elder, especially when a girl experiences her seclusion before the wedding with the young man who becomes her husband. In addition to isolated in the room for forty days and forty nights, planned for the perfection of the appearance of the time of marriage will be all over the body of the bride and groom will be massaged, frothed, and maturation of food that is known to fatten. At the same time programmed also a bitter beverage or a variety of traditional herbs regularly to disfigure the bride's body.

Then when considered, most of the herbal drinkers in Madura are the women. Tempo used to be a Madurese girl aged 4 years or 5 years have been introduced to herbal medicine. Because since young teenage girls have been taught to enjoy drinking traditional herbs like saffron-colored rice, after their adult then become accustomed to herbs. This habit sometimes causes some Madurese to be extreme or fanatical, to say that it is better not to eat than to drink herbs. At least or at least in his time, for a Madurese girl who has just come the first month has been available a special herbal medicine, whose goal is disguised by saying that the herbs they drank will add to their charm.

Data Sampang regency health office in 2016, there was 7 Madura jamu industry which is in Sampang. However, after the survey directly into the industrial location, only 3 of herbal medicine industry is still operating, the herbal industry Madura Sari, Madura Ayu, and Putri Pahlawan (BPS, 2017). The third where the herbal medicine industry is within the herbal medicine industry is the street Pahlawan City Sampang. Madura Sari herbal medicine industry stood in the Year 1914 and is located at street Pahlawan, Rongtenggah. Sampang. Nyai Hajrah founders, early efforts just make herbal owners delivery. Besides herbs Madura maternal herbal industry also manufactures herbal extracts and herbal stiff high blood pressure in the form of infusion (liquid) and powder. In 1997 the herbal industry has permission Madura Sari began operations with No. 068 / IKOT / Java / 1997.

In the hands of the successor to two several products were developed and producing new products such as herbs empot-empot legit Madura, ASI launched herbs, herbal blood cleanser, herbal medicine and herbal healthy super manly man in the form of infusion (liquid) and powder. Marketing herbs begin reaching the market Madura and Surabaya. The year 2000-2016 Madura Sari herbal medicine industry began to be on the cusp of success because many products produced some 27 products which consist of herbal sexual plants, herbs, and herbal health beauty.

In 2004 the herbal industry Madura Sari received recognition from the director general of the Food and Drug Administration MOH No. TR 003 204 501. The superior product is empot-empot legit Madura, galian rapet, and ma'jun super. The marketing has begun to crawl out of the country such as Singapore, Germany, Malaysia, and Saudi Arabia despite shipping a small scale, for marketing in Indonesia include, Kalimantan, Yogyakarta, Makassar, Tangerang, Jakarta, Blitar, Maluku, Sukabumi, Surabaya, West Java, Banyuwangi, Jember, Bekasi, Bondowoso, and Madura.

The herbal industry is Madura Ayu established in 1938 and located in street Pahlawan IV, Rongtenggah Sampang. The initial capital in 1938 is IDR. 125.000, - sufficient capital for the purchase cost of raw materials and the cost of purchasing the equipment is simple. The raw materials used are cumin item, laos, honey, ginseng, key retrieval, turmeric, nutmeg betel, areca and other medicinal plants. The capacity for each production as much as 50-80 kg. Sources of raw materials derived from Sampang, Bangkalan, and Surabaya. Madura Ayu has 16 kinds of herbs which consist of 3 types of herbal form of powder, and chopped plintiran. Rapet wangi herbal medicine is an excellent product Madura Ayu. Marketing area of Jakarta, Borneo, Malaysia, and Saudi Arabia. The third herbal medicine industry is Princess Heroes is one of the traditional herbal medicine industry Madura established since 1992. This business was founded by the mother Asmat and already 24 years into herbal medicine. Initial issued capital of Asmat mother IDR. 15.000.000, -, this capital for the purposes of operating expenses and production costs.

Putri pahlawan medicine herbal industry is located in street Pahlawan V, Rongtenggah, Sampang. When compared with Madura Ayu, and Madura Sari, less strategic industrial location and away from the highway so it is difficult to access by consumers. There eight types of herbal medicine produced by industry Puti pahlawan. Medicine herbal pious coral is a flagship product of Heroes daughter industry, product prices ranging from IDR. 15.000-25.0000, - per item. Raw materials used in the production process, namely: the essence of jasmine, cumin items, pulu juice,

ginger, betel leaves, turmeric, ginger, wood, clove, cayenne, cardamom honey and other medicinal plants. Suppliers of raw materials derived from plantation own, Bangkalan, Sampang and Surabaya. Regional marketing area includes Sampang, Surabaya, Bangkalan, Borneo, Malaysia, Saudi Arabia. So far Daughter Hero had never done a special product promotions. This led to the brand Putri pahlawan are less known by consumers.

The production process of herbs is done by hand because they have not found the machines appropriate, processed (product) madura medicine herbal consists of three different forms namely chopped, plintiran and powders. In general, materials used in the manufacture of herbal medicine among which turmeric, cumin items, turmeric, ginger, betel, galangal, cardamom, lempuyang and others. Suppliers from farmers Sampang, Bangkalan, and Surabaya. Supplier of Sampang is a priority for suppliers of herbal raw materials offered have quality and quantity demanded by the industry, it can be said that 75% of the raw materials used come from this supplier. Suppliers Bangkalan only as an alternative if the supplier Sampang could not meet the demand of the industry, as many as 25% of the raw materials used, to the supplier Surabaya is just some raw materials are needed for a local supplier does not supply the raw materials such as dullness, kedawong and cumin.

In processing the product, Madura medicine herbal industry is still using equipment that is simpler and less maintenance. In general, the production process for all types of herbal medicine is almost the same, the difference is found in the form of end products as well as compounding medicinal herbs adapted to be made. In the drying process Madura Sari still use the method sun drying (sunlight) use of sunlight is a weakness for the industry because of sanitation in terms of raw material is already less and if the raw material does not dry completely then the raw materials will be invaded by fungi.

The industry will discard moldy herbal raw materials, because the raw materials used when no good will impact on the final outcome of herbs. Things like this are avoided by the owners because it will reduce consumer confidence. Cheap labor costs is a force for the industry this is related to the profit made by the owner, the employee's salary the greater industrial advantage. When compared with the Maximum Regional Wage Sampang, 2016 is IDR. 1.300.000, - the wages of employees of herbs that only IDR 550.000,-/month is cheap. Labor availability that many highly profitable industry in terms of obtaining herbal medicine industry employees because it requires no criteria or qualification employees were very high. One local government policies to support the development Sampang Micro, Small and Medium Enterprises (SMEs) to be more advanced and independent nature of providing training coaching human resource development (HRD) and capital injections. In addition to development aid, the government Sampang also facilitates the licensing process in accordance with the rules contained in Sampang Regency Regulation No. 21 Years 2002 on the trade business license. The business license is needed for the legality of operations and in order to get access to capital assistance, equipment and training local counterparts.

Industries engaged in the sale of herbal medicine is very profitable buyers. All the herbal medicine industry in Sampang offer products that are relatively the same, so this gives the satisfaction of consumers to choose the desired product if the desired product buyers are not available. Then the buyer to easily move from one industry to another industry. The process also allows the industry to move because of its location adjacent to each other industries. Industry competitors offer products, quality and prices are relatively the same. This is a threat to an industry because the bargaining power of buyers is very high. Pricing is done based on consideration of the behavior of competitors but also based on the total cost of production of the company with the addition of a 10% cost advantage. In general, the prices set relatively high compared to its competitors. Prices were relatively more expensive and the quality will influence the consumer in making a decision to buy a product. The relatively high price is a drawback for the herbal medicine industry.

There is eight power that herbal medicine industry in Sampang, namely; the products offered are varied, extensive marketing area, easy access to the industry, various forms of products, the government abattoir, have permission department of health, labor costs are cheap, readily available labor. While there are five weaknesses are; financial record keeping simple, limited capital owned, drying using sunlight, no periodic engine maintenance, low labor education. There are five opportunities of the herbal medicine industry in Sampang, namely; the habit of drinking herbal Madura society, people consume traditional medicine, the development of technology is growing, herbal medicine Madura be the superior product. Meanwhile, four threats owned by, among others; rising raw material prices, easy to enter the industry newcomers, the price of a product depends on the price of raw materials, high-level competition.

Based on the identification conducted on internal and external environmental factors that produced the strengths, weaknesses, opportunities, and threats Madura herbal medicine industry. The next step is to develop alternatives for the company strategy by using SWOT matrix. SWOT analysis obtained from the four (4) alternative strategies, namely:

1. Strategic Strengths-Opportunities (SO).

There are two SO strategy, namely promoting a more vigorous, and the development of new markets. Promoting more vigorous because people's habits consume herbal medicine can provide an opportunity for the herbal medicine industry Madura to further expand the marketing area, ways to expand the marketing area is by promoting products more aggressively in cooperation with local authorities, such as the exhibition activities organized by government, the exhibition of various types of products with a variety of shapes to be offered, so the opportunity for consumers to choose the herbs that want and needs will be met, then the consumer will be more interested in buying. To do this promotional strategy Madura herbal medicine industry can take advantage of current technological developments such as the Internet as a media campaign, by utilizing the Internet companies can reach consumers who were in different places (home and abroad). Advantage other uses Internet technology company can conduct online transactions with customers. In addition, the company also undertake the development of a new market, one of the strategies that can be applied by Madura herbal medicine industry, namely the development of new markets to introduce new products into geographic areas with new consumer groups as well. The development of this market by opening new branches in various places by considering that the area has sufficient raw material availability much, the government's support regarding the establishment of new businesses and high purchasing power.

2. Strategy Weaknesses-Opportunities (WO)

The use of equipment or modern technology, it is advisable because during this time the industry still uses sunlight to carry out the drying process, of course, this will reduce the quality of herbal raw materials, especially when the rainy season is a barrier for Madura herbal medicine industry for drying herbal raw materials, with the aid of the government, the industry will be able to take advantage of modern technology in order to improve product quality. The price of the machines in the production process of herbs is fairly expensive, but with the help of government Sampang, Madura Herbal industry can get it at no cost for the purchase of machinery. Local authorities need to do the training, supervision and guidance of the herbal medicine industry Madura considering the average less educated workers, such as training on how to operate and take care of the machine before and after each use, so that the machinery in a state ready for operation, and does not interrupt the production process.

3. Strategy Strengths-Threats (ST)

Maintaining and improving the quality of products, this strategy is to avoid the threats that exist to utilize the strength of the industry. Armed with trademark itself and experienced since 100 years, making Madura herbal medicine industry strives to continue to maintain and improve the quality of its products. Good quality products can maintain existing customer loyalty amid the competition of similar products and substitute products, given the level of competition the higher the herbal industry.

4. Strategy Weaknesses-Threats (WT)

Cooperation with distributors and agents outside Madura herbal medicine industry to expand the marketing area. Currently the marketing area is quite extensive but its weakness is its delivery just a little, this gives the advantage that quite a bit for the Madura herbal medicine industry, this strategy needs to be done because during this time the industry does not have a branch of business outlets outside of Madura, the companies are advised to cooperate with herbal agents to expand the marketing area. From the SWOT analysis that has been done, the chart shown in Figure 1 below can be made.

S-O 1. Promoting a more vigorous 2. Development of new markets.	S-T 1. Use of equipment or modern technology
W-O 1. Maintaining quality of products 2. Improving quality of products	W-T 1. Cooperation with distributors and agents to expand the marketing area

Figure 1. SWOT Analysis

The results of this SWOT analysis, there are three sub-models items, namely the development of the herbal industry Madura; (1) Design Sub Management Model that includes a database of herbal medicine industry, organizational structure, job description of labor, (2) Design Sub Production model of the which includes the production technology, product standardization, product packaging design (3) Design Sub Marketing Model that includes pricing standardization, utilization of information technology, cooperation with distributors and local Governments. So hopefully with reviews, their three draft sub-models will assist in the development of madura herbal medicine industry.

4. Conclusion

Madura herbal medicine industry has a very good market potential but experiencing obstacles in the field of human resources, management, and marketing. Integration of the three submodels can be done through the herbal medicine industry associations in Sampang regency, standardize the product and revitalize marketing through the utilization of information technology.

References

- Adriansyah, G. *et al.*, 2017. Pengembangan Sentra Industri Tas Dan Koper Tanggulangin Dalam Menghadapi MEA. *Jurnal Darussalam: Jurnal Pendidikan, Komunikasi dan Pemikiran Hukum Islam*, 9(1), pp. 23–29.
- Akhir, L., 2009. Kajian potensi pengembangan pasar jamu.
- Biro Pusat Statistik., 2017a. *Kabupaten Bangkalan Dalam Angka 2017*. Biro Pusat Statistik.
- Biro Pusat Statistik., 2017b. *Kabupaten Pamekasan Dalam Angka 2017*. Biro Pusat Statistik.
- Biro Pusat Statistik., 2017c. *Kabupaten Sumenep Dalam Angka 2017*. Biro Pusat Statistik.
- BPS., 2017. *Kabupaten Sampang dalam Angka 2017*. BPS.
- David, F. R., 2011. *Strategic Management*. Pearson.
- Hidayat, R. and Herlambang, Y., 2009. Pengembangan Tata Kelola Industri Kecil-Menengah di Madura, *Jurnal Teknik Industri*, 11(1), p. pp-61.
- Mustajib, M. I. *et al.*, 2010. Magang kewirausahaan pada industri kecil jamu tradisional ramuan madura, pp. 1–10.
- Mutmainnah., 2009. Table of Contents, *Masyarakat Kebudayaan dan Politik*, 22(2), pp. 121–127.
- M. F. F. Mu'tamar, M. Ulya, and khoiril Hidayat, "Product development of black Piper retrofractum Vahl tea (black PrV tea)," in *IOP Conf. Ser.: Earth Environ. Sci*, 2019.
- Padmaningrum, D., Rahayu, W. and Wibowo, A., 2013. Rancang Bangun Model Kelembagaan Agribisnis Padi Organik Dalam Mendukung Ketahanan Pangan, *Jurnak Ekonomi Pembangunan*, 14(1), pp. 92–101.
- Pembangunan, J. E., 2013. Rancang Bangun Model Kelembagaan Agribisnis Padi Organik Dalam Mendukung Ketahanan Pangan, 14.
- Penelitian, H. *et al.*, 2003. Jamu Industry Products Development and Their Instutional Structure Analysis], XIV(1).
- Prasnowo, M. A., Khomaruddin, A. and Hidayat, K., 2017. Strategi Pengembangan Sentra Industri Kecil Menengah Produksi Krupuk', *Teknika: Engineering and Sains Journal*, 1(1), pp. 17–24.
- Pudjadi, T. and Tommy, A., 2007. Analisis Untuk Perencanaan Strategi Sistem dan Teknologi Informasi Pada PT Ritrans Cargo, 2007(Snati).
- Rachmad Hidayat, Y. H., 2009. Pengembangan Tata Kelola Industri Kecil, *Jurnal Teknik Industri Universitas Petra*, 11(1), pp. 61–71.
- Wahyuningsih, W., 2004. Analisa strategi pemasaran industri kecil permen karamel susu di Daerah Pengalengan, Jawa Barat

Biographies

Millatul Ulyya is a teaching staff in the Study Program of Agroindustrial Technology, Trunojoyo University, Indonesia

Khoiril Hidayat is Coordinator of Agroindustrial Technology Study Program, Trunojoyo University, Indonesia.

M. Fuad Fauzul Mu'tamar is Head of Science and Agricultural Technology Departement, Trunojoyo University, Indonesia.