PAPER • OPEN ACCESS

Strategy of Trade-Reliable Featured Product Supporting Regional Innovation Systems

View the article online for updates and enhancements.

Strategy of Trade-Reliable Featured Product Supporting Regional Innovation Systems

H Y Riskiawan [1], B H Purnomo [2], A Abdurahman [3], B Hariono, T D Puspitasari

[1,3] Politeknik Negeri Jember, Indonesia, [2]Universitas Negeri Jember, Indonesia

e-mail: [1]yufit@polije.ac.id

Abstract. Pacitan, Ponorogo, and Magetan had planned the development of featured products as contained in the Medium Term Development Plan (MTDP) until 2020. The focus of development is almost similar to featured products derived from agribusiness, food processing, handycrafts, and tourism. The geographical proximity results characteristics of natural resources and social culture have similarities, including the type of featured products, constraints, problems, and opportunities for development. Given the characteristics and the support system of some featured products contained in these three regions have a lot in common and their functional interactions involving actors from across the region, it is necessary to develop cross-jurisdictional policy. The resulting strategy should be able to support the development of Regional Innovation System (RIS). The purpose of this research is 1) Determining featured product cross-regional between Pacitan regency; Ponorogo and Magetan districts in support of RIS development; and 2) Designing a featured product development strategy using supply chain management in order to drive the local economy. Based on the results of research conducted, featured products across the region that have potentiality to be developed are: processed products of "janggelan"; leather products, and woven bamboo.

1. Introduction

Since 2002 the government has given direction on how to build national competitiveness and strong social cohesion [1], in realizing a prosperous, just, advanced, self-sustaining and civilized society through the National Innovation System as intended in Law Number 18 of 2002 On the National System of Research, Development, and Application of Science and Technology [2]. At the regional level, the National Innovation System has become a Regional Innovation System (RIS) which is currently a new approach to systemic regional development. RIS development involves all actors from local government to community. The entire actors are integrated with the main elements of resources, institutional, and network development to influence the speed and diffusion of innovation and learning process in achieving regional development goals [3].

RIS lays a solid foundation on managing regional development comprehensively, creatively and innovatively. Strengthening Regional Innovation System as an assertion that RIS must be built based on local potential by organizing the institutional role, optimizing the resources potential, improving business network and management mechanism in a cohesive manner. Therefore, the development of featured products across regions should be based on the elements contained in RIS in order to provide optimal results for enhancing regional competitiveness and community welfare on an ongoing basis [4]. Geographical proximity results in the characteristics of natural resources and socio-cultural differences, including their featured product types, constraints, problems, and development opportunities [5].

The purpose of this research is 1) Determining featured products across the region Pacitan; Ponorogo and Magetan districts in support of RIS development; And 2) Designing a leading product development strategy based on supply chain management (SCM) in order to drive the local economy.

2. Methods

This research includes a descriptive quantitative research type [6]. This research applies a number of decision-making techniques and descriptive statistical methods [7] to explore and discover key factors in cross-regional featured product development, analyze market potentials and prospects, and formulate solutions to solutions [8] in the form of strategy and action plans for product development featured. This research uses survey research design to collect data and actual information needed. The research consists of the following stages:

1. The first phase is a preliminary study conducted to determine the initial description of cross-regional featured product development in the location of the study.
2. The second phase determines the types of commodities and featured products across regions using expert survey method and FGD (Focus Group Discussion). Selected commodities and selected products are then identified potential, covering constraints, problems, opportunities, supply of raw materials and market supply using descriptive method.
3. The third phase is to conduct value-added analysis of featured products using Hayami method, and continued by analyzing its market potential descriptively.
4. The fourth phase is to formulate a featured cross-regional product development strategy using SWOT analysis technique.

3. Result and Discussion

The survey results show that there are three featured products across the region that have high priority to be developed in Magetan, Ponorogo and Pacitan districts, namely 1) Processed products of "Janggelan"; 2) Bamboo handicraft products; And 3) Leather products. The three types of products have a high relation, especially from the supply aspects of raw materials, markets, and trading activities of products / commodities.

     a. Processed products of "Janggelan"

Until now, janggelan or black "cincau" is the main processed product of janggelan produced by small scale business actors in Pacitan, Ponorogo and Magetan districts. The actors involved in the chain of production and marketing activities of black cincau, among others, farmers, collectors, processed industries, middlemen, and traders / retailers, as can be seen in Figure 1.
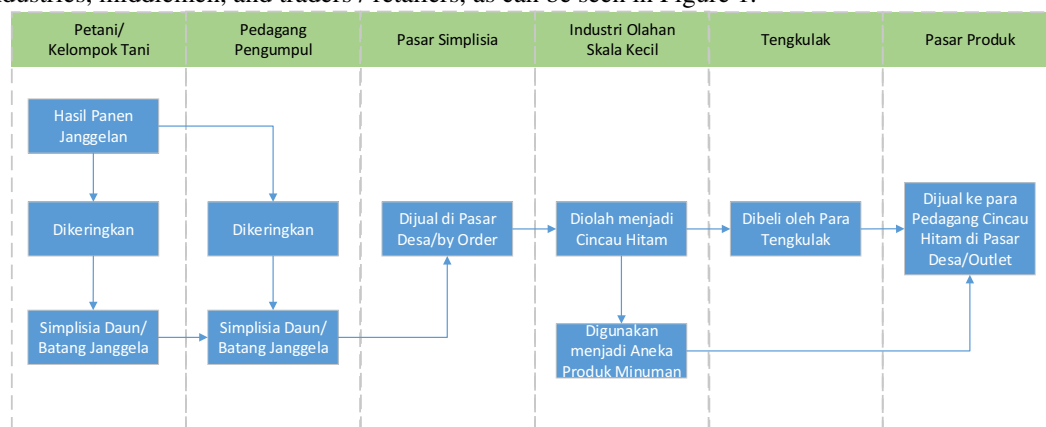
Figure 1. Production Chain and Marketing Black "Cincau"

The production area of Janggelan in Pacitan Regency is Nawangan, Bandar, and Arjosari Sub-districts with total planting area reaching 743.15 ha and the volume of product is 1,307,501 tons dry / year. Meanwhile, the janggelan production area in Ponorogo Regency is located in Ngrayun and Slahung

sub-districts with planting area of 391.75 ha and total production of 217.87 tons of dry / year dried. Within a year, the crop can be harvested between 3-4 times without having to do the new soil. Stems and leaves of the harvest are dried under the sun by drying in the yard of the house or curb with / without pedestal. Leaves and stems dry janggelan then sold to collectors with a price between IDR. 300 - 1,500 per kg of wet, whereas, the dry price ranges from IDR 9,000 - 10,000 / kg. The collecting traders are then priced at IDR 15.000 - 16.000 per kg, leaves with whole stems IDR 13.000 - 14.000 per kg, and leaves are shaped with the price of IDR 12,000 per kg.

Black "cincau" processing industry is a highly prospective business. Demand for black "cincau" tends to increase, especially in the dry season and ramadhan. Small scale industries with a capacity of 20 kg of dry janggelan leaves / stems can produce about 300 kg of black cincau per day. If the price of dry raw material is assumed IDR. 16.000 / kg and the selling price of black cincau is IDR. 2,500 / kg and other input costs (helper raw material, operational) is IDR. 3.500 / kg of raw materials, then the added value obtained is IDR. 18,000 / kg of raw material with a ratio of 48%. If it is assumed that this business has four laborers whose daily wage is IDR 4,000 / person, then the level of business profit about 33.33%.

   b.   Bamboo handicraft products

Bamboo handicraft products become excellent products of Magetan, Ponorogo, and Pacitan districts because they are supported by the abundant bamboo plant potential in the region. The products produced by these three regions have similarities, namely various bamboo handicraft products based on webbing, such as capil, newspaper place, parcel place, serving cover, tray, basket, etc. Business actors involved in the chain of bamboo handicraft production activities as shown in Figure 2 consist of farmers, collecting traders, handicraft industries, and end product sellers.

Figure 2. Chain of Production and Marketing Activities of Bamboo Products

The supply chain of bamboo for handicraft production starts from bamboo farmers. Bamboo plants are ready for harvest (cutting) when aged 4 - 5 years. Generally, farmers cut bamboo when it gets orders from collecting merchants. Bamboo Apus to be cut has a yellowish green color, diameter 6 - 8 cm with a length of 10 - 13 m. At the farm level, the selling price depends on the size of the bamboo diameter and the length of the bamboo. Bamboo Apus with a diameter of 8 cm, length 4.5 m, and thickness of 2 cm ranged from IDR 7,000 - 9.000 per stem. Meanwhile, the price of wulung bamboo with a diameter of 9 - 12 cm, length 5-6, and thickness of 2 cm ranges from IDR 12,500 - 15,000 per stem.

The collecting merchants sell bamboo Apus to their buyers at a higher price. The profit margin earned by collecting merchants is about 15 - 25%. For example, if collecting merchants buy bamboo from farmers for IDR 9000 per stem, it will be resold at a price of about IDR12.500 per stem. Efforts to increase the added value of bamboo handicrafts can be done by developing various decorative products, such as lights and souvenirs. For example is where bamboo ornamental lamps. The prospect of this product market is very potential because it is in great demand by café, restaurant and hotel / villa entrepreneurs. Bamboo ornamental lamps are also favored by certain circles to enhance the impression

of the beauty of the private home room. Therefore, the price of this product is quite expensive when the manufacturing process is simple, the raw materials required are few, and the time of manufacture is short. This effort is very efficient because of a single bamboo can be produced up to 20 units of ornamental lights. If the price of bamboo is IDR 12,500 per stem, and product selling price is IDR. 25,000 per unit, and contribution of other input factors IDR 2,000 per unit of product, then the added value obtained is IDR 485,500 per bamboo stalk with value added ratio of 97.1%, and profit rate 83.52%.

  c. Leather products

  Leather handicraft is one of the creative industries that is encouraged by the government because of its uniqueness and high competitiveness and potentially penetrate foreign markets. The guaranteed supply of sustainable raw materials in terms of quantity, quality, and price are some of the key factors for creating a robust and competitive skincare industry [9]. Conversely, success in developing the downstream industry will potentially also be a leverage for the development of the leather tanning industry to become more competitive and advanced [10]. Leather products industry is very potential to be developed in the research area as a featured product across the region. This is because in the region has developed leather industry from upstream to downstream, especially in Magetan and Ponorogo regency. In fact, Magetan Regency has long been known for its leather craft. In order to develop the leather products industry, a series of integrated policies are needed so that in addition to addressing the problems faced by upstream and downstream industries effectively, it can also foster innovation opportunities for strengthening the industry's competitiveness [11].

  The leather products industry involves many sets of activities and business actors, as shown in Figure 3. Each business actor has an important role affecting the performance of other actors.
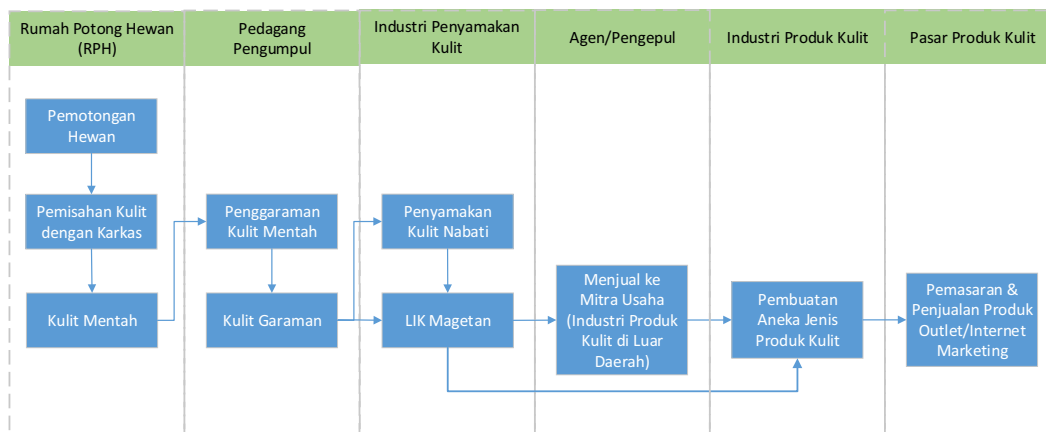
Figure 3. Chains of Production Activities and Marketing of Leather Goods Products

  The leather tannery industry is an industry that processes raw leather into finished leather using tanners, both chemical tanner (performed by LIK Magetan). The tannery industry often faces scarcity of leather supply. The largest supply of leather material occurs during Idul Adha holidays where the amount of leather material reaches 30% of the total supply in a year. The largest cost component of the tannery industry is raw materials. The price of raw leather is quite expensive because the amount of supply has not been able to meet the needs of the leather industry. This is one factor in the low utilization of LIK Magetan capacity of only 60% of installed capacity. The leather from the tanning industry in Magetan Regency has been utilized by around 1,500 small business units of footwear, bags, suitcases and other leather products located both in East Java and outside East Java such as Yogyakarta (23%), Jakarta (8%), Bali (17%), Mojokerto (33%), Sidoarjo (12%), Magetan (6%), and others (2%).

  Household footwear industry is a highly prospective business. For each finished leather sheet (1 sq ft) the added value is about IDR. 14,000 per sq ft of finished leather with an added value ratio of 38.89%. This value is obtained if the raw material used is 500 ft sq and produces 150 pairs of footwear products with an average price of IDR. 120,000 per pair.

4. Conclusion

Magetan, Ponorogo, and Pacitan districts have several types of featured products across the region, namely processed products janggelan, bamboo craft products, and leather products. The determination of the featured product is based on the conformity with the development direction of RIS of East Java Province, the direction of RIS strengthening in each districts, the development policy direction in the document of Regional Medium Term Development Plan (RPJMD) of each district, and the survey in the research area.

The development of featured products is not optimal because it is generally still traditional and has many obstacles, including limited capital and marketing reach, low production efficiency and product quality and lack of institutional business. Diversification of featured products produced can still be developed because in addition supported by the supply of raw materials is very large, market demand and value added is also quite high. Other problems encountered in the research area are the low human resources capability especially in creating attractive product design, limitations in business partnerships, capital and marketing coverage, and inefficient production equipment. Strategies that can be done such as by increasing the partnership with other business actors as well as institutions providers of capital services.

Acknowledgment

References

[1]   Siahaan BR. *2003. Penentuan produk unggulan berbasis cassava dalam rangka meningkatkan pendapatan industri kecil menengah (IKM)*.Tesis: Institut Pertanian Bogor. Bogor.

[2]   Syafa'at N, Friyatno S. 2000. *Analisis dampak krisis ekonomi terhadap kesempatan kerja dan identifikasi komoditas andalan sector pertanian di wilayah Sulawesi: pendekatan input-output*. Ekonomi dan Keuangan Indonesia XLVIII (4):369-394

[3]   Dalgaar T, Hutchings NJ, Poter JR. 2003. Review Agroecology, Scaling and Interdiciplinary. Agriculture, Ecosistems and Environment 100:39-51.

[4]   Gliessman SR. 2004. *Integrating agroecological processes into cropping sistems research*. Journal of Crop Improvement 11 (1/2):61-80 and New Dimensions in Agroecology 61-80.

[5]   Rumayar *TP,* Kairupan AN, Hutahaean L, Femmi NF, Syafruddin. 2005. *Keragaman dan analisis komoditas unggulan perikanan umum berdasarkan zona agroekologi di Kabupaten Buol Sulawesi Tengah*. Jurnal Pengkajian dan Pengembangan Teknologi Pertanian 8 (3):460-466.

[6]   Firdaus M dan Farid MA. 2008. *Aplikasi Metode Kuantitatif Terpilih untuk Manajemen dan Bisnis*. Bogor: IPB Press.

[7]   Nurhadryani, Y., Sumantri, B. and Riskiawan, H.Y., 2005. Expert system for selecting statistical techniques for univariate Vol 3, No 2, 2005.

[8]   Saaty L T. 1993. *Decision Making for Leaders the Analytical Hierarchy Process for Decisions (Pengambilan Keputusan Bagi Para Pemimpin Proses Hirarki Analitik untuk Pengambil Keputusan dalam Situasi yang komplek). PT Pustaka Binaman Pressindo. Jakarta.*

[9]   Hadinata R. 2014. *Analsis Strategi Pengrajin Kulit dalam Mengembangkan Usaha (Studi Kasus di Sentra Industri Kerajinan Kulit Kelurahan Selosari Magetan. JESP.* Vol. 6, No 2. Nopember 2014.

[10] Rustam H. 2009. *Analisis Daya Saing Produk Kulit Olahan Pada Industri Penyamakan Kulit di Kabupaten Magetan. Media Soerjo .*Vol. 5, No. 2. Oktober 2009. ISSN 1978 – 6239.

[11] Yunidiawati I dan Syairudin B. 2013. *Pengembangan Model Kemampuan Inovasi Produk pada Industri Kecil Kerajinan Kulit Kabupaten Magetan Menggunakan Structural Equation Modelling. Jurnal Teknik.* Vol. 1, No. 6.