



Optimization of South Sulawesi Silk Chain Value

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Abstract

The author explores business strategies for optimizing the silk industry by integrating SWOT (Strengths, Weaknesses, Opportunities, Threats) and BMC (Business Model Canvas) analyses using the Quality Function Deployment (QFD) method. This approach prioritizes critical elements based on consumer needs and creates a House of Quality (HoQ) framework. The study concludes that silk industry competitiveness and optimization are achievable through strategic planning, key partnerships, and addressing important areas like cost structure and value proposition. The interaction between SWOT and BMC analyses impacts various aspects of the business model, including customer segmentation, value propositions, customer relationships, key resources, activities, partnerships, and cost structure.

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Introduction

Silk is a rare item nowadays, even though silk should be an icon of Indonesia. Silk fabric is the result of natural silk activities which have long been an integral part of the culture of various tribes in Indonesia. The beauty and fineness of silk fiber allows it to be processed into various clothing products, including silk sarongs, metered cloth, traditional clothing, silk shirts, wallets, bags and various other souvenirs (1). Natural silk includes a series of agro-industrial activities, starting from silkworm breeding, mulberry plant cultivation,

silkworm rearing, thread spinning, weaving, to batik making, dyeing, stamping, finishing, as well as the production of garments and other finished goods, including marketing (2). The entire process of natural silk covering sectors from upstream to downstream. In the upstream sector, these activities can include cultivating silkworms and mulberry plants as silkworm feed. In the downstream sector, it involves industry and marketing (3).

The only active silk producer in Indonesia is in the province of South Sulawesi. South Sulawesi's silk was a famous silk and the only commodity in Indonesia that could compete globally in the future. However, at this time silk has become empty and does not have the glory it once had (Bappelitbangda, 2021). This is also the reason raised in this research case study.

South Sulawesi silk industry business actors need to evaluate strategies to improve in building a reliable and integrated system. Strategy is a plan, aiming at a future direction in interacting with competitive conditions in order to achieve goals. There are several contexts for evaluating the strategy optimization of a company or business group, namely starting with previous performance measurements that have been carried out so that it can be seen to what extent the predetermined strategy and targets can be achieved. Planning and development of business actors needs to be carried out, in order to determine better strategic optimization decisions.

Measurements in optimizing performance are carried out using SWOT analysis. SWOT analysis is used to obtain information from situation analysis of the company's internal and external environment. This analysis is very necessary to help develop a business in recognizing strengths and weaknesses and taking advantage of every existing opportunity and avoiding or minimizing threats in market competition. New strategies are very necessary in carrying out marketing efforts and business development strategies in the future (Faruq & Usman, 2014; Jatiningtias, Harisudin, & Sundari, 2018; Nurrahmi, Saepudin, & Zain, 2019). There are four aspects that will be reviewed, namely: strengths, weaknesses, opportunities and threats.

Apart from that, strategic performance measurement can be done using the Business Model Canvas (BMC). Ihsanul Fuad et al. (2023); Novia, Pasaribu, Sutjipto, & Bustomi (2022), BMC aims to design and formulate appropriate business strategies in order to achieve the desired goals. The application of BMC can be seen from nine key elements, namely: customer segments, value propositions, distribution channels, customer relationships, revenue sources, key resources, key activities, key partners, and cost structure.

From both SWOT and BMC analysis, the author is interested in exploring further regarding business strategy as an optimization step that is expected to be more perfect. Therefore, after getting the results from the SWOT and BMC measurements with the aim of ranking priorities and the most important thing, they can be reclassified, namely by collaborating these two measurements with Quality Function Deployment (QFD) measurements. QFD is a structured methodology used in the product planning and development process to determine specifications for consumer needs and desires, as well as systematically evaluate the advantages and disadvantages of the capability of a

product or service in meeting consumer needs and desires.(Francisco ADSSilva, Sulistio, & Abusini, 2015; Yasmi, 2023). The QFD process starts from hearing the customer's voice and then continues through 4 main activities, namely: 1) Product planning; 2) Product design (product design); 3) Process planning (process planning); 4) Process planning control. The main benefits if a company uses QFD are to reduce costs, increase income and reduce production time(Azhari, SW, & Irianti, 2015; Wagiono & Hamrah, 2007; Yasmi, 2023).

Performance evaluation to determine optimization strategies is very important to maintain and increase the growth of the silk industry. Competitive rivalry can be overcome and the silk industry can survive in a volatile market situation. Therefore, this research was conducted to evaluate the performance of the silk industry as an optimization in business.

Several studies have been carried out, but they still have limitations. Apart from that, research related to SWOT, BMC, and QFD is still carried out individually so that it is needed simultaneously to understand how to determine performance measurements. This can be synergistic if measurements are carried out jointly, with the hope that it can be attractively packaged in one container with varied content and provide rich literacy in measuring performance in optimizing strategies.

Research Methods

This research aims to evaluate performance to obtain business strategy optimization. Based on the research objectives, this research uses descriptive research using the method used, namely looking at potential (SWOT), describing evaluation strategies (BMC), and describing planning and development (QFD) which strengthens the value proposition.

Results and Discussion

Situation of the internal environment and external environment with SWOT measurement can be mentioned as internal and external factors, as follows

Table1: South Sulawesi Silk Business SWOT Factors

Internal Factors (Strength)	Internal Factors (Weakness)
Raw materials are of high quality	Infrastructure is inadequate
Unique culture and traditions	The thread pattern does not vary
Local human resources	Brand and marketing management
Community support	Technological limitations
Farmers have great abilities	Capital and funding
Export market potential	Lack of Education and training
Supplies and continuity exist at all times	

Yarn products are eagerly awaited by consumers Have a good brand The price offered is in accordance with the quality of the product	
External Factors (Opportunity) Government support Sustainable fashion trends Innovative product development Digital marketing Environmentally friendly Online kiosks are easy to promote. Collaboration with designers and brands	External Factors (Threats) Changes in Consumer Preferences Environmental and Climate Risk Synthetic products have a wide variety of patterns Global competition Raw Material Price Fluctuations Competitors competitors Risk of product counterfeiting and violation of intellectual property rights (Piracy and Counterfeiting) Market competition

After carrying out the SWOT analysis, a detailed ranking was obtained, namely as follows:

Table 2: SWOT Matrix Results

Strength	Weakness
Quality of raw materials	Technological limitations
Unique culture and traditions	Capital and funding
Local human resources	Infrastructure
Community support	Education and training
Export market potential	Brand and marketing management
Opportunities	Threats
Sustainable fashion trends	Market competition
Collaboration with designers and brands	Fluctuations in raw material prices
Digital marketing	Changes in consumer preferences
Government support	Environmental and climate risks
Innovative product development	Piracy and counterfeiting

South Sulawesi Silk has strength, is known for its high quality, providing a competitive advantage in the market. South Sulawesi Silk is known for its high quality, providing unrivaled excellence in the market. Abundant natural beauty and a suitable climate make this region an ideal place for the production of high-quality silk. Silk from South Sulawesi has gained a reputation for its fine and strong fibers, providing a soft and comfortable texture when worn. This quality provides a competitive advantage for local producers, attracting domestic and international markets with the beauty and superiority of the silk fabrics produced. With great pride, South Sulawesi continues to make achievements in the silk industry, maintaining traditions while innovating to maintain its position as a leader in the global silk market.

Apart from the extraordinary quality of silk, South Sulawesi also has a wealth of local human resources which are the main pillars in this industry. Strong support from local communities, from silkworm farmers to cloth craftsmen, is an invaluable strength. Not only does it maintain cultural heritage and traditions in silk production, but it is also involved in the process of innovation and development of the latest technology. Apart from that, the high export potential of South Sulawesi silk products adds to the attractiveness of this industry. With ever-increasing demand from international markets that value the authenticity and quality of local products, the region has a great opportunity to expand market share and increase export revenues, driving regional economic growth and strengthening its position as one of the world's leading silk production centers.

However, the South Sulawesi silk industry also has a threat. including market competition, fluctuations in raw material prices, changes in consumer preferences, environmental and climate risks, as well as piracy and counterfeiting. In the SWOT analysis it was found that the South Sulawesi silk industry showed that the silk industry had strengths and threats. This assumes that the silk industry has problems that require strategic optimization steps to be taken.

Research explains that strengths can be utilized to overcome challenges (Mashuri & Nurjannah, 2020). The strength of silk can overcome threats, maintain and improve the quality of silk from raw materials and can provide silk products that can compete with synthetic counterparts.

- a) Silkworm Food: The quality of mulberry leaves, the main food of silkworms, affects the quality of the silk. High quality mulberry leaves can provide optimal nutrition for silkworms. Silk Spinning Process: The silk spinning process can affect the fineness and strength of the silk thread. This process is often carried out carefully to ensure the best results.
- b) Natural or Non-Toxic Dyeing: Silk produced with natural or non-toxic dyeing tends to be of better quality, because it does not contain harmful chemicals.
- c) Well Managed Production Process: Good production management, from caterpillar rearing to spinning and dyeing, can ensure silk quality is maintained.

Good silkworm seeds have high endurance. Furthermore, lots of eggs that can hatch a lot is a sign of good care so that they can be of high quality. This indicates that besides the silkworms being healthy, they are also well cared for (Nurhaedah, 2006).

The most important thing in optimization lies in silk products. Raw materials need to be considered to maintain their quality. Silk raw materials, namely from the breeding and maintenance of silkworms, are very important to produce good quality silk. A strategic step is to pay attention to raw materials and silk products.

Next, the BMC analysis is collaborated with SWOT. The BMC model is a complex business model made simple through a canvas approach, by drawing a canvas sheet containing a map of nine elements (boxes) that allows entrepreneurs to identify business potential. The nine elements of the canvas must be understood and considered in running a business, such as customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure (Kadir, Munir, Umar, & Maming, 2021; Kurnia, 2023; Nuraeni, 2018). Below are the results of the BMC grouping of the South Sulawesi silk industry which will then be collaborated with SWOT analysis as a strategic step in shaping the competitiveness of the South Sulawesi silk business.

Business Model Canvas Sutera Sulawesi Selatan



Picture 1: BMC Silk Industry Results

Based on the picture above, the findings obtained include:

a) Key Partners:

- Local Silkworm Breeders and Mulberry Farmers: They are the main source of raw materials. Close collaboration with them is important to ensure the quality and availability of silk.
- Loom Supplier: The quality of the loom influences production efficiency and the quality of the final product.

- Fashion Distributors and Retailers: They help in expanding the market and product range.
- Government Agencies and NGOs: Support in the form of subsidies, training, or certification can increase product credibility and visibility.
- Universities and Research Institutes: They play a role in innovation and research to improve silk quality and production efficiency.

b) Key Activities:

- Silkworm Cultivation: This process must be managed well to ensure the quality of the silk thread.
- Fabric and Fashion Products Manufacturing: This is the core of the business activities, covering from yarn manufacturing to finished products.
- Marketing and Sales: Effective marketing strategies are required to reach the target market.
- Product Development and Innovation: Continuously update products to stay relevant in the market.
- Education and Training: Important to improve the skills of farmers and craftsmen.

c) Key Resources:

- Skilled Labor: Skills in silkworm rearing and cloth making are essential.
- Equipment: Investing in modern equipment can improve efficiency and quality.
- Raw Materials: Availability and quality of mulberry leaves and silk thread is key.
- Technology: For marketing, management and product development.
- Capital: For business operations and expansion.

d) Value Proposition

Restore the glory of South Sulawesi silk and make South Sulawesi the largest silk producer in Indonesia and Southeast Asia. Accomplished in the following way:

- Quality and Uniqueness: Emphasizes the high quality and unique designs of local silk fabrics.
- Sustainability: Demonstrate commitment to environmentally friendly practices.
- Local Community Empowerment: Creating added value for local communities through employment and skills development.
- Personalization: Offering products that can be customized according to customer requests.
- Transparency and Ethics: Provide clear information about origins and production methods.

e) Customer Relationships

- Digital Marketing: Using social media and online platforms to interact with customers.
- Collaboration with Designers: Building relationships with fashion designers to create innovative products.

- Customer Education: Provides information about the value and manufacturing process of silk.
- Customer Service: Provide responsive and personalized service to customers.

f) Channels

- Online Sales: Reach a wider market through e-commerce.
- Collaboration with Boutiques: Reaching customers who value high quality products.
- Exhibitions and Events: Showcase products and build brand awareness.
- Distribution: Through an effective network of agents and distributors.

g) Customer Segments

- Fashion Industry: Main target market looking for high quality materials.
- Sustainable Customers: People who value environmentally friendly and sustainable products.
- Export Market: Reach international markets with premium products.
- Local Communities and Tourists: Targeting those interested in cultural and local products.

h) Cost Structure

- Production Costs: Includes raw material and labor costs.
- Marketing and Promotion: Invest in marketing activities to increase visibility.
- Technology and Equipment: Invest in modern equipment for efficiency.
- Operating Costs: Includes salaries, rent, utilities and more.

i) Revenue Streams

- Increased regional income from the sale of silk thread in local, regional and international markets. Increased welfare of communities involved in the silk industry value chain (silk worm cultivation, silk thread spinning and production, silk craft weaving, etc.).
- Direct Sales: To consumers via online stores or physical outlets.
- Wholesale Sales: To boutiques and retailers.
- Collaboration with Fashion Brands: Through joint projects or limited editions.
- Workshops and Training: As an additional source of income.

The resulting matrix is as follows:

Internal	Strengths: Key Resources Key Activities Value Propositions	Weaknesses: Key Resources Key Partners Cost Structure
	Opportunities: Customer Segments Channels	Threats: Customer Relationships
External		

	Revenue Streams	Key Activities
		Revenue Streams

Picture 2: SWOT results for BMC Silk Industry

Strength represents the internal advantages or assets possessed. In BMC, this strength can be linked to several components, namely: a) Key Resources: identifying resources and capabilities that contribute to strength. This could include skilled personnel, property technology, or unique partnerships. In the South Sulawesi silk industry there is a group of skilled mulberry and silkworm craftsmen and cultivators, there are machine looms (ATM) and modern spinning equipment, and also a sense of pride in the traditions passed down from generation to generation in the community, especially in Wajo and Sengkang; b) Key Activities: analyze how strengths can be utilized to carry out key activities more effectively and efficiently. In the South Sulawesi silk industry, local wisdom in cultivating silkworms and traditional weaving techniques are strengths that can support sustainable silk production; c) Value Propositions: identifying strengths that can create a value offer that is relevant to target consumers. The silk industry in South Sulawesi has a rich history and tradition in silk production, which strengthens the identity and uniqueness of its products. South Sulawesi silk products are known for their superior quality, attracting customers with discerning tastes.

Weaknesses represent internal limitations or areas where the business is less successful. In BMC, weaknesses are addressed with the following components: a) Key Resources: identifying whether there are certain resources that are lacking or need to be improved. In the South Sulawesi silk industry, limited access to modern technology in the production and marketing of silk products. There is also uncertainty in the supply of silk fiber from cultivated caterpillars; b) Key Partners: analyze potential weaknesses and overcome them by creating strategic partnership opportunities to help overcome resource limitations. In the South Sulawesi silk industry, high dependence on local markets can make the silk industry vulnerable to fluctuations in demand. For the upstream sector, currently there is only one supplier of mulberry caterpillars so there is no comparison of quality and price; c) Cost Structure: identifying potential weaknesses that can lead to higher costs, so that strategic steps are needed to minimize costs and make the business more cost efficient. It is recognized in the silk industry that the silk production process is carried out traditionally and limitations in production scale can cause high production costs.

Opportunities are external factors or trends that can be exploited for growth. In BMC, strategies are aligned to exploit opportunities with the following components: a) Customer Segments: identifying customer segments most likely to benefit from opportunities. In the South Sulawesi silk industry, there is an opportunity to make sales through e-commerce platforms which can expand market reach and increase access to global consumers; b) Channels: utilize the right channels to reach potential customers who fall into this opportunity area. In the South Sulawesi silk industry, partnership opportunities with international companies can open the door to larger export markets;

c) Revenue Streams: exploit opportunities to create new revenue streams or expand existing ones. In the South Sulawesi silk industry, the increasing global interest in sustainable and high quality silk can open up new market opportunities. Of course, the need for government support in preserving and maintaining local wisdom and sustainability can provide opportunities for sustainable development.

Threats are external factors or risks that can harm a business. In BMC, to overcome threats by implementing strategies in the following areas: a) Customer Relationships: the need to develop strategies to maintain strong customer relationships. Especially in the face of potential threats such as increased competition due to competition from silk products from other regions or synthetic products that could threaten South Sulawesi's silk market share; b) Key Activities: Dependence on the supply of silk fiber from caterpillars can cause uncertainty in production, climate change which affects fiber production; c) Revenue Streams: Changes in regulations related to the environment or labor can increase production costs and hinder growth.

Product Planning and Development Process The implementation of unstructured interviews with silk business actors revealed several important aspects in running a business, including business development encouragement, vision and mission, decision making, marketing strategy, evaluation, planning steps, and market targets. The following is a discussion of the common threads from the interview:

Business actors look for opportunities to gain profits for welfare and provide feedback to people who need work. This reflects an entrepreneurial drive focused on business growth and benefits to society.

The actions of silk business actors in looking for opportunities to gain profits for welfare, while providing assistance to people who need work, reflect the application of various concepts in business strategy theory. One relevant concept is business growth theory. In this case, business actors try to identify growth opportunities that can help their business develop, such as market expansion or product diversification.

Apart from that, silk business actors also implement differentiation strategies. Seek to differentiate their products or services from competitors through better quality or unique features. In doing so, they can provide greater benefits to customers, which is an important element in a successful business strategy. Not only focusing on financial profits, this statement also describes the concept of social entrepreneurship. Silk businesses have social goals that involve providing positive social or environmental benefits. This is in line with the social entrepreneurship trend where organizations combine profitability with positive social impact.

Furthermore, this approach can be linked to sustainable business strategies. Silk businesses consider social and environmental aspects in their business decision making, creating a balance between economic, social and environmental considerations. In this way, they can achieve long-term sustainable goals while benefiting society and the planet.

Overall, the efforts of silk business actors to seek business opportunities while providing benefits to society reflect the application of various concepts in business strategy theory, which include business growth, differentiation, social entrepreneurship and sustainability. This approach can help them achieve long-term prosperity and success in the business world.

The vision and mission of silk business actors is to be superior, creative and prosperous. This shows a determination to become a successful player in their industry with a focus on innovation and sustainability.

Silk business actors often have a clear vision and mission as a basis for developing their business. One example of a common vision and mission is to be superior, creative and prosperous. This vision reflects the determination to achieve success in the industry involved, with several very important aspects.

First, silk business actors have the determination to excel in the industry. It doesn't just want to be an ordinary competitor, but strives to be the best in terms of products, services and operational efficiency. In fierce competition, this focus on excellence can set them apart from other competitors.

Second, creativity is an important element in this vision and mission. Silk businesses are committed to continuing to innovate in their products or services. They look for new ways to meet customer needs, create more attractive products, and maintain a strong competitive edge. Creativity is a pillar in creating added value.

Apart from it, welfare is also a focus. Silk business actors want to achieve financial success and contribute to the welfare of the surrounding community. They may create local jobs or support the local economy, thereby contributing to the development of more prosperous communities.

Fourth, innovation is key in achieving this vision. Business actors are committed to continuing to develop new products or services, use the latest technology, and improve their business processes. Innovation is a means to achieve sustainable excellence.

Lastly, sustainability is also a concern. Silk businesses can take environmentally friendly actions in their operations, such as using sustainable raw materials or managing waste better. This reflects their commitment to positive impact on the environment.

Overall, this vision and mission provides clear direction for silk business actors in developing their business with a focus on innovation, excellence, and positive impacts on society and the environment. This vision and mission are not only a statement of values, but also a strategic guide that guides their steps towards sustainable success.

Decisions in developing a business are taken by following current market trends. This shows adaptability in facing changes in the business environment. The environment is ideal for reading, a description of the work environment and sales representation can provide optimal evaluation steps.

Marketing strategies are carried out both offline and online with a focus on consumers. This reflects the importance of carrying out marketing that is effective and in line with consumer needs. Recently, it has become a new era of technology. Digital transactions can bring a shift from conventional to automatic. Products are packaged with charming illustrations that depict superior products and will attract consumer interest.

Evaluation is carried out by considering the results of product sales. If results decrease, silk businesses will consider increasing promotions. However, they face obstacles to consumer trust in discounts, so online promotions become an alternative. This shows responsibility in solving business problems.

If a business experiences a decline in profits, business actors are willing to open up new experiences. However, they emphasized the need to check market and technological factors in making this decision. This shows a readiness to adapt to market and technological changes. This can be overcome with business projections, whether the business being run is running or not. The right step is always to control and record financial reports and product stock. This can be the basis for breakthroughs in future promotional steps. The existence of data will provide a strong stimulus or encouragement to continue to innovate in selling products.

The target market is emphasized to achieve as many sales as possible while maintaining quality and consumer satisfaction. The use of technology in marketing strategies is a reflection of the technology literacy trend. Apart from that, silk business actors emphasize the importance of planning in achieving dreams and business effectiveness. Continuous evaluation is carried out to reach market targets and seek maximum profits.

Employees sometimes participate in promotions, even if that is not their primary goal. Promotion aims to introduce products to the public and create greater business opportunities.

Meanwhile, so that the results obtained become a priority to be handled in optimization steps, the author provides the collaboration results obtained from the SWOT and BMC collaboration to produce HoQ as a silk strategy optimization value chain. This is based on the findings and analysis of the data obtained. Everything is summarized in the QFD results which are described as the previous HoQ.

The author discusses based on the HoQ findings the most priority and most important steps for taking strategic optimization steps for South Sulawesi silk. The previous subchapter interpreted that the most important thing for optimization is to obtain it from the BMC method, including: 1) Key Partnership; 2) Cost Structure; and Value Proposition. These three were also touched upon by the research team from the South Sulawesi Balitbangda government and the South Sulawesi Industry Service. Meanwhile, from the SWOT analysis, the results show that strengths and threats also have a correlation. The relationships that really influence them include: 1) customer segments on opportunities; 2) value proportion of strengths, opportunities and threats; 3) customer relationship against weaknesses; 4) key resources regarding strengths, weaknesses and threats; 5) key activities regarding weaknesses, opportunities and threats; 6) key partnerships

regarding strengths, weaknesses and threats; 7) cost structure regarding strengths, weaknesses, opportunities and threats.

Key partnership is the first most important element. Because without a key partnership it seems like it will be empty. Key Partnership can pave the way for the planning and development process for South Sulawesi silk. In it, it is found that there are stakeholders who all need each other. Identify key partnerships, namely Silkworm Farmers, National Research Agency (silkworm seed producers), Importers, UPTD or BLUD, Craftsmen/Weavers, Regional Government. If one of these key partnership identifications is not open, then the planning and development process will not be optimal. So, these stakeholders or key partnerships must be gathered to achieve the same goal, open to each other and synergize to support each other. Based on the results of interviews with the South Sulawesi Balitbangda, it was stated that the lack of social relations between farmers and the lack of government support could become strained. This will certainly have an impact on farmer morale.

Apart from that, farmers lack knowledge in cultivating and how to care for caterpillars to produce quality silk. Most farmers report that many caterpillars die. This is a lack of attention and guidance so that the provincial government may step in to provide education to silk farmers. However, this requires funds or costs to carry out these activities. Limited funds can hinder this activity. Then, the "key partnership" stakeholders essentially synergize with each other in planning and developing South Sulawesi silk.



Picture 3: Cycle Key Partnership

Cost Structure is a cost structure. A cost structure is very necessary as a planning and development step in optimizing the silk strategy in South Sulawesi. Costs must be planned to support activities in carrying out production. In the cost structure there are several things that are needed in designing costs for planning and developing silk production, namely: purchasing the best quality silk seeds, improving the quality and

developing research on silk cocoons from brin, optimizing silk production equipment in the district. Wajo and districts. Soppeng, improving the quality of weaving equipment, increasing human resources for silk craftsmen, socializing South Sulawesi silk thread, and re-branding the silk industry. Costs can be budgeted in advance, without these costs, if there is a purchase, it automatically cannot be purchased which of course will stall or just wishful thinking.

The final optimization strategy, namely the value proposition, is a statement that is built to provide the public with better knowledge of superior products and provide value and benefits. In this case, the governor stated his slogan in the plan and its implementation, namely "Restoring the glory of Silk in South Sulawesi. Making South Sulawesi the Largest Silk Producer in Indonesia and Southeast Asia."

This value proposition has been implemented, but is still not complete. It takes time for silk to return to its former glory. It is best if optimization is carried out step by step to realize the slogan. Discussion, coordination and support are ideal in making this happen. Therefore, for optimization it is necessary to evaluate the activities previously carried out. From this evaluation it is hoped that it can fill in the gaps to be filled in subsequent activities. It is also necessary to set a practical and efficient agenda by involving key partnerships in making silk successful again in South Sulawesi.

Every product definitely has strengths, weaknesses, as well as opportunities and threats. Silk is the same. Of the four, from the findings, silk has both strength and threat in South Sulawesi. Silk in this area is known as the only local product that has good quality among domestic and foreign communities. However, South Sulawesi silk is also under threat. Optimization in silk strength can be optimized in the materials and ways of managing and caring for silkworms as best as possible. This is also an appeal that farmers need expert guidance and training in maintaining the quality of the silk produced from the caterpillars being treated. While there are current threats, of course efforts can be made to prevent and transform the education of real silk in the community. This effort is made so that the public can find out what is genuine and what is not genuine. There is currently a lot of silk in circulation, namely synthetic silk to reduce selling prices and because of the lack of genuine silk due to limited silkworm cultivators.

Meanwhile, the implementation of House of Quality (HoQ) can help silk producers to better understand market needs and preferences, including key segments in the market. With HoQ, silk producers can conduct in-depth analysis of various key market segments to understand the needs and preferences of each segment.

For example, if there are several market segments that prioritize high quality and exclusive designs, silk manufacturers can use HoQ to evaluate the product characteristics that are most important to those segments. Can adjust their production strategy and silk product design to meet the quality standards desired by the segment.

On the other hand, for market segments that pay more attention to price or economic value, HoQ can help silk producers to identify product features that can reduce

production costs without sacrificing the required quality. Thus, silk producers can adjust their pricing strategies to maintain competitiveness in the silk market.

Apart from that, HoQ can also help silk producers in determining more appropriate marketing strategies for each market segment. By understanding the needs and preferences of consumers from each segment, they can direct their marketing efforts to more effectively reach and attract the attention of consumers in each segment.

Paying attention to the price and quality of silk products can be done by managing the production process. Current production is silk produced by importing caterpillars from abroad. This requires coaching farmers to cultivate silkworms that can produce good quality. Reducing imports of raw materials and preserving caterpillars can be done with competent knowledge and practice. For this reason, optimization is done by conducting training and supervising farmers producing raw materials and cultivating silkworms and how to care for silkworms.

Meanwhile, the design produced also needs to be considered. Considering that synthetic silk can threaten real silk, real silk designs need to be attractive. Genuine silk product innovation can be designed to follow market trends following consumer desires. Besides that, it is necessary to apply for a patent.

Conclusion

It can be concluded that the ideal model for the silk industry development framework is that it can use SWOT analysis, BMC and QFD collaboration. Competitiveness can be built with comprehensive planning and development involving key partnerships as a synergy cycle in silk production, and optimization can be done with the HoQ map. From the previous results of SWOT and BMC, there are several things that are most important to optimize, namely as follows: 1) Key Partnership; 2) Cost Structure; and 3) Value Proposition. The overall relationship between SWOT and BMC that really influences them are: 1) customer segment on opportunities; 2) value proportion of strengths, opportunities and threats; 3) customer relationship against weaknesses; 4) key resources regarding strengths, weaknesses and threats; 5) key activities regarding weaknesses, opportunities and threats; 6) key partnerships regarding strengths, weaknesses and threats; 7) cost structure regarding strengths, weaknesses, opportunities and threats.

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