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# Analysis Of Supply Chain Development Strategy For Ornamental Corals Agribusiness, UKM Gapekhi Makassar

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**Abstract**

*This research aims to understand and analyze the supply chain development strategy for ornamental corals agribusiness in UKM Gapekhi Makassar, including the upstream supply chain, internal supply chain, and downstream supply chain. The research method used is a case study. The research location and respondents were purposively selected from UKM Gapekhi Makassar and the distribution areas of ornamental corals in Jakarta, Java, and Bali. The data analysis methods used include Benchmarking Supplier analysis, IFE Matrix analysis, EFE Matrix analysis, IE Matrix analysis, SWOT Matrix analysis, Data Envelopment Analysis (DEA), and analysis of marketing distribution channel margin and efficiency. The research findings indicate that the company receives the highest supply of ornamental corals from the supplier Rezky Bahari, while the highest number of rejected corals comes from the supplier Hidayah. The highest number of coral shipments is from Supplier Banyu Samudra Lestari, while the lowest number of coral shipments is from Supplier Virly Jaya Abadi. The IFE Matrix score is 3.416, the EFE Matrix score is 3.400, the IE Matrix indicates the company is in Cell 1, and the SWOT Matrix produces several strategies that can be implemented by the company to foster its development. The marketing distribution channel flow starts from the producer (UKM Gapekhi), to the distributor (Coordinator), to the wholesaler/depot (Leader), to the retailer (Loper), and finally to the end consumer (Buyer). The DEA analysis reveals inefficient areas in the distribution of marketing products. The margin and efficiency of the marketing distribution channel are good and efficient, with an average product marketing percentage of 68.25%.*



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**Key words: Downstream, upstream, internal, supply chain, strategy, SWOT.**

## INTRODUCTION

Over time, various sectors within a country should continue to advance and develop. The role of the government in optimizing and improving the quality of activities in each sector is crucial so that their progress can be felt by the society (Kasmi et al., 2023). The fisheries sector is one of the sectors that has played a significant role in the economic development of Indonesia (Abdullah et al., 2021; Kasmi et al., 2020). Job creation, individual productivity enhancement, improved livelihoods and income, and foreign exchange generation through export-import activities are among the contributions of the fisheries sector to economic development (Ababouch & Fipi, 2015; Alharthi & Hanif, 2020). Fisheries also create a ripple effect that stimulates other sectors, such as trade, industry, and even education through research studies conducted at universities and the absorption of educated workforce (Anwarudin et al., 2023; Siahaan et al., 2023). Fisheries are consistently directed towards IT-based industrialization processes, which further propel and engage other sectors in these industrialization processes (Alemzero et al., 2021; Kasmi, Kumalasari, et al., 2022).

As an economic activity, fisheries play a crucial role in national progress and the welfare of the society. It should be continuously advanced, developed, and given priority to generate positive economic growth. This demands innovation, creativity, and the optimization of stakeholder roles, particularly the government, to ensure the sustainability of fisheries activities and contribute to the nation's welfare. Furthermore, with the current focus on industrialization in fisheries, it is essential to maintain a balance and preserve the aquatic ecosystems. Based on these considerations, the concept of the blue economy, proposed by Cicip Sutardjo, the Minister of Maritime Affairs and Fisheries, has emerged.

The export market for ornamental corals is highly significant due to the variety of exotic coral species. Diversifying the products of ornamental corals becomes an attraction for the export market. There is an opportunity to engage in ornamental coral agribusiness activities that can enhance the welfare of fishermen, contribute to regional income, and generate foreign exchange.

Strategies that are appropriate and efficient in managing a company well include implementing effective supply chain management. This allows companies to understand and monitor the performance of their supply chain from upstream to downstream processes. Supply chain management is an integrated application that provides



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information system support to management regarding the procurement of goods and services for the company while managing relationships with partners to ensure the optimal availability of products and services.

The blue economy is a concept that aims to optimize aquatic resources to enhance economic growth through innovative and creative activities while ensuring business sustainability and environmental preservation (Hassanali, 2020; Kasmi, Amir, et al., 2022). The concept of the blue economy emphasizes and prioritizes efficiency. Efficiency drives the development of investment and fisheries businesses while maintaining environmental sustainability. The core principle of the blue economy is ecosystem-friendly activities.

## LITERATURE ANALYSIS AND METHODOLOGY

### *Time and Location of the Research*

The research was conducted from January to June 2022 at UKM Gapekhi, which is engaged in ornamental coral agribusiness, and in the distribution areas of Jakarta, Java, and Bali. The selection of research locations was purposive, based on specific considerations.

### *Research Method and Sample Collection*

The research method used was a case study. A case study is an intensive investigation that encompasses all relevant information about an individual or a few individuals, typically concerning a single psychological phenomenon. Case studies provide historical or biographical information about an individual, often including their experiences in therapy (Schoch, 2020).

Data collection was conducted through two methods: observation and interviews with respondents. The respondents in this study included the manager, 5 employees, 5 intermediary traders affiliated with the suppliers under UKM Gapekhi through purposive sampling, and 5 consumer respondents through accidental sampling. The data collected consisted of primary and secondary data. Primary data was obtained from interviews, while secondary data was obtained from relevant sources such as company records. Data collection techniques involved direct observation, interviews using questionnaires.

### *Data Analysis Method*

The data analysis method used in this study combines qualitative and quantitative methods. The analysis includes the Benchmarking Supplier analysis to assess the


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upstream supply chain, the IFE Matrix, EFE Matrix, IE Matrix, and SWOT Matrix to assess the internal supply chain, and DEA (Data Envelopment Analysis), margin, and marketing distribution channel efficiency analysis to evaluate the downstream supply chain.

The Benchmarking Supplier analysis involves comparing the accepted and rejected supplies of ornamental corals from various suppliers over the past 6 years. It is a continuous measurement and comparison process of one or more business processes of a company with the best-performing companies in those processes. This analysis provides information to help the company identify and implement process improvements (Hassanali, 2020).

The IFE Matrix analysis is used to assess the influence of internal factors, such as strengths and weaknesses, on the sustainability of UKM Gapekhi, a company engaged in pasteurized ornamental coral business. The EFE Matrix analysis is used to understand how UKM Gapekhi responds to external factors, such as opportunities and threats. The IE Matrix combines the IFE and EFE matrices to generate nine cells representing different combinations of total weighted scores from the IFE and EFE matrices. The IE Matrix positions various organizational divisions in the nine cells. It is based on two key dimensions: the total weighted average IFE on the X-axis and the total weighted average EFE on the Y-axis.

SWOT analysis is a systematic identification of various factors to formulate company strategies (Surveyandini, 2022). This analysis is based on logic that maximizes strengths and opportunities while minimizing weaknesses and threats. Strategic decision-making processes are always related to the development of the company's mission, objectives, strategies, and policies (Asriany et al., 2023).

DEA analysis, using Banxia Frontier Analyst, generates efficiency scores for each Decision Making Unit (DMU) in three DMU regions. DEA compares input and output data of an organization. The Green condition with a 100% percentage indicates efficient DMUs, while the Amber condition with a 90%-99.99% percentage and the Red condition with a 0%-89.99% percentage indicate inefficient DMUs. Improvement strategies for less efficient distribution areas are implemented by adjusting actual values to target values (Asriany et al., 2023). Margin and efficiency analysis of the marketing distribution channel. The margin in the distribution chain is calculated using the formula:

$$MP = Pf - Pr$$

Where:
MP = Margin in the distribution chain (Rp)
Pf = Consumer price (Rp)


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Pr = Producer price (Rp)

Efficiency in the distribution chain is calculated using the formula:

$$EP = \frac{(Pr - Pt)}{Pr} \times 100\%$$

Where:
EP = Efficiency in the distribution chain (%)
Pf = Consumer price (Rp)
Pr = Producer price (Rp)

## RESEARCH AND RESULTS

### *Identifying Supply Chain Strategies of UKM Gapekhi*

The supply chain strategy of UKM Gapekhi begins with the upstream supply chain, which involves KUD supplying ornamental corals to UKM Gapekhi through suppliers such as Rezky Bahari, Banyu Samudra, Pancamina Jaya, Citra Samudra, Fadhil Utama, Umega, Hidayah, and Virly Jaya Abadi. The suppliers provide ornamental corals that have passed the laboratory tests conducted by UKM Gapekhi. The approved corals are then sold to exporting companies located in Jakarta, Java, and Bali. The procurement process of ornamental coral products by suppliers is part of the internal supply chain. The produced and cultivated corals in the farm are marketed in various regions in Indonesia for export purposes. This includes the downstream supply chain strategy implemented by the company. The supply chain strategy of UKM Gapekhi, as illustrated in Illustration 1, is based on the perspective of (Vachon & Klassen, 2006), who define the supply chain as an integrated set of activities, including the flow of information, related to three aspects: upstream, internal, and downstream supply chain.

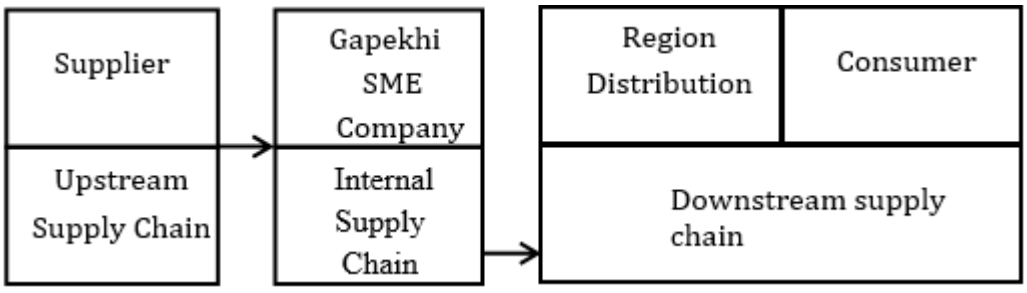



Illustration 1: Supply Chain Strategy of UKM Gapekhi

*Benchmarking Supplier Analysis*


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The Benchmarking Supplier analysis provides data on the comparison of the received and rejected supply of ornamental corals from suppliers. The supplier that has provided the highest amount of ornamental corals to UKM Gapekhi is Rezky Bahari, with a delivery of 2,171 pieces. The average annual delivery of ornamental corals received is 362 pieces, totaling 12,545,510 pieces. The average number of ornamental corals received per year is 2,090,918 pieces, which accounts for 32.03% of the total received corals. On the other hand, the supplier with the lowest amount of received corals is Virly Jaya Abadi, with a delivery of 720 pieces. The average annual rejection of corals is 20 pieces, and the total number of rejected corals is 20,519 pieces. The average number of corals received per year is 3,420 pieces, which represents 0.05% of the total received corals. The continuity of supply is an important factor in the varying supply from suppliers. According to (Scholten & Schilder, 2015), supply continuity is an ongoing process based on specific periods, which creates mutual interdependence that benefits both parties involved.

The Benchmarking Supplier analysis also provides data on the most and least rejected supply of ornamental corals. The supplier with the highest number of rejected corals is Hidayah, with a supply of 297 pieces. The average annual rejection of corals is 50 pieces, and the total number of rejected corals is 1,130,800 pieces. The average number of corals rejected per year is 188,467 pieces, accounting for 29.8% of the total coral rejections. On the other hand, Umega is the supplier with the least number of rejected corals, with a delivery of only 2 pieces. There is no average annual rejection of corals from Umega, and the total number of rejected corals is 1,686 pieces. The average number of corals rejected per year is 281 pieces, representing 0.05% of the total coral rejections. The quality of the corals plays a significant role in the acceptance or rejection of the supply from the suppliers. Coral quality is influenced by various factors such as color brightness, shape, coral type, and production frequency.

The supplier that has delivered the highest supply of ornamental corals to UKM Gapekhi is Banyu Samudra Lestari, with a total delivery of 12,992,870 pieces, accounting for 30.25% of the supply. On the other hand, Virly Jaya Abadi is the supplier with the lowest supply of ornamental corals, with a total delivery of 22,205 pieces, representing only 0.05% of the supply.

*IFE and EFE Matrix Analysis*

The IFE and EFE Matrix analysis yield the internal and external factors of the company. The internal factors result in a total IFE score of 3.416, with a subtotal strength score of 3.048 and a subtotal weakness score of 0.368. According to David (2011), an IFE



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matrix with a total score of 2.5 indicates that the company has strong internal factors. The external factors result in a total EFE score of 3.400, with a subtotal opportunity score of 2.800 and a subtotal threat score of 0.600. According to Kipdiyah et al. (2013), a total EFE score greater than 2.700 signifies the company's ability to leverage existing opportunities and overcome threats.

*IE Matrix Analysis*

Based on the research findings, the IE matrix analysis of UKM Gapekhi's ornamental coral production is presented in Illustration 2.

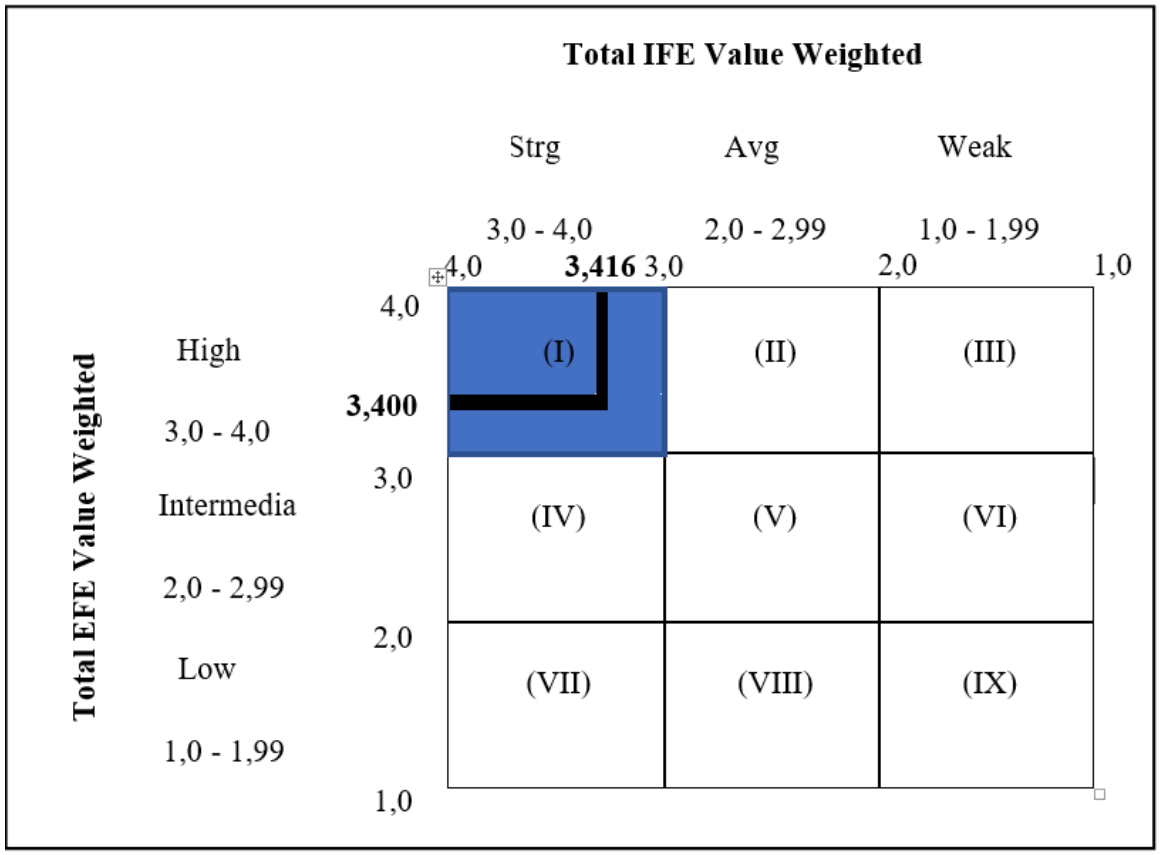



Illustration 2. IE Matrix Results

Illustration 2 shows that the IE matrix is derived from the total scores of IFE and EFE. The IFE score is 3.416, and the EFE score is 3.400, indicating that the company is positioned in Cell 1, which signifies that the company has favorable opportunities and strengths, as well as the ability to address weaknesses and threats.

*SWOT Matrix*



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The SWOT matrix is a strategic planning tool used to evaluate the internal strengths and weaknesses of a company as well as the external opportunities and threats it faces in the business environment. The analysis helps identify key factors that can impact the company's performance and guide the development of strategic initiatives.

In the context of the research conducted, the SWOT matrix analysis was conducted to assess the internal and external factors influencing the performance of the company under study. Based on the research findings, the SWOT matrix analysis results are presented in Table 1. Shows the outcomes of the SWOT matrix analysis.

**Table 1. SWOT Matrix Analysis Results**

| **Internal Factors** / **External Factors** | ***Strengths* (*Strengths-S*)** | ***Weakness* (*Weakness-W*)** |
|---|---|---|
| | 1. Company Capital.<br>2. Ornamental coral products of various types.<br>3. Production uses a modern system.<br>4. Have a Laboratory Test.<br>5. Have an SOP.<br>6. Modern product packaging.<br>7. A comprehensive ditribsu flow across all regions.<br>8. Product promotion.<br>9. Direct-to-consumer enlargement.<br>10. Have a work shift.<br>11. Division of tasks according to the field. | 1. Erratic income.<br>2. There was a break-down of the machine for circulating water.<br>3. Recording company data is incomplete.<br>4. Perishable products.<br>5. Distribution risk.<br>6. Product risk.<br>*7. Human Error* |



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| ***Opportunities* (*Opportunities-O*)** | **S-O Strategy** | **W-O Strategy** |
|---|---|---|
| 1. Government support.<br>2. Population growth.<br>3. People's income levels are increasing.<br>4. Changes in healthy lifestyles in the community are influenced by the level of community knowledge.<br>5. The demand quota has not been met.<br>6. The selling price of the product is affordable in the community.<br>7. Products that are well known among the public. | 1. Improve quality, quantity and continuity of production.<br>2. Expanding the market and simplifying distribution channels.<br>3. Increase promotion by utilising technological advances.<br>4. Focusing product development. | 1. Capitalise on existing corporate opportunities to stabilise the company's finances.<br>2. Strengthen personnel management in order to stabilise company performance.<br>3. Maintain good product quality and quantity.<br>4. Evaluate and improve the company's marketing system because the company's opportunities are very supportive in the marketing field. |
| ***Threats* (*Threats-T*)** | **S-T Strategy** | **W-T Strategy** |
| 1. Policy changes from the government.<br>2. Raw material prices are volatile.<br>3. Erratic order quantity.<br>4. Erratic climate and weather affect product yields.<br>5. Indonesians do not | 1. Handled government policy changes well to stabilise the company's finances.<br>2. Controlling raw materials with modern systems and making new innovations<br>3. Improved promotions | 1. Research and plan the development of better pasteurised ornamental coral processing,<br>2. Take preventive measures to improve the company's poor system. |



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| | | |
|---|---|---|
| have the habit of keeping marine aquariums.<br>6. Competition between com-panies. | and stabilised product sales by leveraging the performance of loper. | |

Source: Primary Data Analysis UKM. Gapekhi, 2022.

Table 1 illustrates the development strategies derived from the internal and external factors that have been translated into the SWOT matrix strategies. The SWOT matrix generates four sets of alternative strategies: SO, ST, WO, and WT. The SO strategy is formulated based on the company's thought process, utilizing strengths to seize and maximize opportunities. The ST strategy is applied by leveraging the company's strengths to overcome external threats. The WO strategy is implemented by capitalizing on existing opportunities while minimizing weaknesses. The WT strategy is based on defensive actions, aiming to minimize weaknesses and avoid threats (Rangkuti, 2016). SWOT analysis encompasses efforts to identify the strengths, weaknesses, opportunities, and threats that determine a company's performance.

DEA Analysis

Based on the research findings, the DEA analysis results of the distribution area in the Semarang Region are presented in Table 2.

**Table 2. presents the results of the DEA analysis for the distribution area in the Semarang Region.**

| **No.** | **Distribution Area Semarang** | ***Score*** | ***Efficent*** | ***Condition*** |
|---|---|---|---|---|
| | Hard Coral size XL | ------(%)------ | | |
| 1 | Jakarta | 100,00 | Efficient | *Green* |
| 2 | Java | 98,00 | Inefficient | *Amber* |
| 3 | Bali | 96,90 | Inefficient | *Amber* |



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| | | | | |
|---|---|---|---|---|
| | Hard Coral size L | | | |
| 1 | Jakarta | 100,00 | Efficient | *Green* |
| 2 | Java | 100,00 | Efficient | *Green* |
| 3 | Bali | 100,00 | Efficient | *Green* |
| | Hard Coral size M | | | |
| 1 | Jakarta | 100,00 | Efficient | *Green* |
| 2 | Java | 99,50 | Inefficient | *Amber* |
| 3 | Bali | 100,00 | Efficient | *Green* |
| | Hard Coral size S | | | |
| 1 | Jakarta | 100,00 | Efficient | *Green* |
| 2 | Java | 100,00 | Efficient | *Green* |
| 3 | Bali | 90,70 | Inefficient | *Amber* |

Source: Primary Data Analysis UKM. Gapekhi, 2022

Table 2 shows the DEA analysis results of the distribution area in the Semarang Region. The data indicates that there are inefficient product distributions in various regions. In region 2, the distribution of products in cup packaging has a percentage of 98.00% with an amber condition, and in region 3, it has a percentage of 96.90% with an amber condition. Additionally, the distribution of products in mini pack 200 ml packaging in region 2 has a percentage of 99.50% with an amber condition, while in region 3, the distribution of products in pure pack 500 ml packaging has a percentage of 90.70% with an amber condition. According to (Schoch, 2020), the DEA analysis results with a green condition indicate 100% efficiency, while results with an amber condition indicate efficiency percentages between 90% and 99.99%, and results with a red condition indicate efficiency percentages between 0% and 89.99%, indicating inefficiency in the DMUs (Decision-Making Units).

*Margin Analysis*

The marketing margin analysis of UKM Gapekhi reveals data on the margins from producers to consumers for various sizes of hard coral. The margin for XL-sized hard coral is Rp 750.00/box, for L-sized hard coral it is Rp 285.50/box, for M-sized hard coral packaging it is Rp 925.00/box, and for S-sized hard coral packaging it is Rp 2,180.00/box. As the margin increases, the marketing margin also increases. Sstates that the marketing margin value is the difference in price between the two levels of the marketing system multiplied by the quantity of the marketed product (Sianturi et al., 2022).

*Efficiency Analysis*



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The efficiency analysis of the marketing distribution channel for pasteurized ornamental coral products of UKM Gapekhi shows that it is classified as good or efficient. The product efficiency percentages are as follows: 70% for Size M, 71% for Size S (75 ml), 69% for Size XL, and 63% for Size L, with an average percentage of 68.25%. According to (Diawati et al., 2023), marketing efficiency values range from 0% to 50%, indicating an inefficient marketing channel. If the percentage is above 50%, it indicates an efficient marketing channel.

## CONCLUSION AND RECOMMENDATIONS

The analysis of UKM Gapekhi's supply chain provides valuable insights into the company's operations. The supply chain strategy comprises three key components: upstream supply chain (KUD), internal supply chain (company), and downstream supply chain (product distribution to consumers). In the upstream supply chain, the company receives the highest supply of ornamental coral from Rezky Bahari, while facing challenges with supplies from Hidayah. The downstream supply chain involves the distribution of products through various channels, from producers to distributors, wholesalers, retailers, and ultimately reaching consumers. The analysis of the internal supply chain reveals a positive outlook, with the company demonstrating good opportunities and strengths to overcome weaknesses and threats. Furthermore, the evaluation of the distribution channels highlights certain inefficiencies in specific regions and product sizes. However, overall, the margin and efficiency of the company's distribution channels are satisfactory, with an average product marketing percentage of 68.25%. These findings suggest that UKM Gapekhi has the potential for growth by optimizing its supply chain strategy, enhancing distribution efficiency, and leveraging existing opportunities in the ornamental coral market. By addressing inefficiencies and capitalizing on strengths, the company can improve its market position, meet customer demands effectively, and achieve sustainable growth.

## REFERENCES

*Ababouch, L., & Fipi, F. (2015). Fisheries and aquaculture in the context of blue economy. Feeding Africa, 2(21--23), 13.*

*Abdullah, A., Kasmi, M., Karma, K., & Ilyas, I. (2021). Pengembangan Usaha Kecil Dan Menengah (UKM) Ikan Hias Melalui Pelatihan Pembuatan Aquarium. To Maega: Jurnal Pengabdian Masyarakat, 4(2), 231–241.*

*Alemzero, D. A., Iqbal, N., Iqbal, S., Mohsin, M., Chukwuma, N. J., & Shah, B. A. (2021).*



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*Assessing the perceived impact of exploration and production of hydrocarbons on households perspective of environmental regulation in Ghana. Environmental Science and Pollution Research, 28, 5359–5371.*

*Alharthi, M., & Hanif, I. (2020). Impact of blue economy factors on economic growth in the SAARC countries. Maritime Business Review, 5(3), 253–269.*

*Anwarudin, O., Patiung, M., Utami, S. W., Zulfiyana, V., Putra, H. S., Haryanto, Y., Permatasari, P., Inti, R. W., Amruddin, A., Sugiarto, M., & others. (2023). Pemberdayaan Masyarakat dalam Agribisnis. Yayasan Kita Menulis.*

*Asriany, A., Kasmi, M., & Yusuf, Y. M. (2023). Analysis of the Freshwater Ornamental Fish Marketing System in Makassar City, South Sulawesi. International Journal of Business and Quality Research, 1(02), 130–151.*

*Diawati, P., Mutalov, I. C., Kasmi, M., Abdullah, A., & Yuliastuti, H. (2023). Predicting the Indonesian sustainable marketing communication on 2023 trends. Jurnal Studi Komunikasi, 7(1), 16–33.*

*Hassanali, K. (2020). CARICOM and the blue economy--Multiple understandings and their implications for global engagement. Marine Policy, 120, 104137.*

*Kasmi, M., Amir, S. M., Aman, A., Haruna, B., & Usman, A. F. (2022). Implementation of Science and Technology for Regional Development: Improving the Quality of Ornamental Fish Production with a Concentration of Clove Oil Alternative to Sustainable Fishing Gear. Mattawang: Jurnal Pengabdian Masyarakat, 3(3). https://doi.org/10.35877/454RI.mattawang1223*

*Kasmi, M., Kumalasari, T., Amir, S. M., Usman, A. F., Ahmad, I., Aman, A., & others. (2022). Design of an Educational Application for Conservation and Ornamental Fish Capture Areas Based on Android. Ceddi Journal of Education, 1(2), 13–18. https://doi.org/10.56134/CJE.V1I2.26*

*Kasmi, M., Ningsih, H., Mardia, M., Amruddin, A., Andryanto, A., Basriwijaya, K. M. Z., Febrinova, R., St Aisyah, R., Firmansyah, F., Tahir, R., & others. (2023). Agribisnis di Era Society 5.0. Yayasan Kita Menulis.*

*Kasmi, M., Ridwan, M., & others. (2020). ANALISIS KELAYAKAN AGRIBISNIS KARANG HIAS DI CV. REZKY BAHARI MAKASSAR, SULAWESI SELATAN, INDONESIA. Jurnal IPTEKS Pemanfaatan Sumberdaya Perikanan, 7(14).*

*Schoch, K. (2020). Case study research. Research Design and Methods: An Applied Guide for the Scholar-Practitioner, 245–258.*

*Scholten, K., & Schilder, S. (2015). The role of collaboration in supply chain resilience. Supply Chain Management: An International Journal, 20(4), 471–484.*



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*Siahaan, A. S. A., Sudewi, S., Sari, S. P., Hasibuan, H. S., Sari, D. R., Anisa, H. A. N., Mangka, A., Sari, V. K., Junairiah, J., & Kasmi, M. (2023). Teknologi Budidaya Tanaman Hortikultura. Yayasan Kita Menulis.*

*Sianturi, R. B., Daulay, A. H., & Mirwandhono, E. (2022). Marketing Analysis of Buffalo at the Animal Market in Suka Village Karo Regency. Jurnal Peternakan Integratif, 10(2), 117–138.*

*Surveyandini, M. (2022). The Results of the SWOT Analysis Approach in Formulating Company Strategy at the American English Course Purwokerto. ProBisnis: Jurnal Manajemen, 13(1), 7–14.*

*Vachon, S., & Klassen, R. D. (2006). Extending green practices across the supply chain: the impact of upstream and downstream integration. International Journal of Operations \& Production Management, 26(7), 795–821.*



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