

Determination of Product Life Cycle (PLC) for Formulation of Marketing Strategy at UD. Matt Coffee Bondowoso

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Abstract

UD. Matt Coffee is an agroindustry that produces various processed coffees, including green beans, roasted coffee, and ground coffee. Owner of UD. Matt Coffee took the initiative to establish this agro-industry to improve the welfare of smallholder coffee farmers in Sumberwringin District because the trading process for green bean is considered unprofitable and does not yet have added value. This study aims to determine and analyze the position of UD. Matt Coffee Arabica Coffee products uses a Product Life Cycle (PLC) approach based on the Polli and Cook method and to determine and analyze marketing strategies in developing its business based on the Product Life Cycle (PLC) for UD. Matt Coffee Arabica Coffee products. The analytical method used in this study is the Polli and Cook method to determine the position of UD. Matt Coffee Arabica Coffee products based on the product life cycle. The data collection technique used interview techniques with resource persons, namely the owner of UD. Matt Coffee. The results showed that at the growth stage through the Product Life Cycle approach at UD. Matt Coffee Bondowoso. The growth stage is characterized by rapid market acceptance and a substantial increase in UD. Matt Coffee Bondowoso's profits and research results also show that the strategy adopted by UD. Matt Coffee Bondowoso in accordance with its position in the product life cycle, namely UD. Matt Coffee Bondowoso is looking for innovative strategies to maintain and even increase sales growth which includes market, product and marketing mix modifications.

Keywords: Marketing, Product Life Cycle (PLC), Strategy.

1. Introduction

An understanding of the company's positioning, the capabilities of its competitors, and determining where, when, and how the competitive conditions faced are necessary for competition because this matter is carried out so that all aspects of the situation can be identified completely and used to formulate the right strategy. The essence of this competitive strategy is to realize the entire company environment, both internally and externally, in a way that is conducive to achieving company goals (Fatimah and Tyas 2020). This is important because almost every product has a shelf life, the stages through which product sales go through are different, and each stage presents its own unique challenges, and the profit derived from sales will rise and fall at various stages throughout the product life cycle. (Kotler and Armstrong 2008) states that the Product Life Cycle can be applied by marketers as a useful framework for describing how product and market mechanisms work.

The stages in the Product Life Cycle that must be considered are the introduction stage, the growth stage, the maturity stage, and the decline stage (Kotler and Armstrong 2008). When a product is first launched into the market, it often experiences a gradual acceleration of sales during the introduction stage. Due to the significant costs associated with product launches, no

profit will be generated at this stage. This happened in research conducted by (Fitri 2017) where the Yoghurt product marketing strategy is located in the introduction stage which is seen by the growth industry (competitors) are high but the company still has a relatively small market share. In contrast to research (Dalimunthe 2020) where the marketing strategy for Tapioca Vermicelli products in Sinar Jaya Agro-industry, Monas Lancar Agro-industry, Moro Seneng Agro-industry is in the growth stage where during this development phase, companies work to improve their products while expanding to new market subsets. and distribution channels. The next stage is called the maturity stage, marked by declining sales growth because the majority of potential customers have accepted the product. During this stage, the company seeks innovative strategies to restart sales growth, which may involve modifying markets, products, or marketing mix. The final stage of the product life cycle is when it enters the declining stage, which is marked by a decrease in sales and income (as shown by research) (Umar 2010) where the marketing strategy for Processed Tuna products at PT. Bethel Citra Seyan Gorontalo was in a decline stage as seen by a decrease in sales volume due to seasonal conditions, intense competition, etc

Because each of these stages has unique condition, the marketing strategy that needs to be implemented will also be different. This is something that absolutely needs to happen for a company to realize its goals and reach its goals. The marketing mix strategy is a type of marketing strategy that can be utilized in the context of the product life cycle concept, as stated by (Kotler and Armstrong 2008). The marketing mix strategy according to the statement (S. Assauri 2013) in (Rahmah, Fitri and Oktari Ulma 2017) includes the 4P, namely product, price, promotion and distribution. Because the product life cycle is the product strategy that best symbolizes the success of a marketing strategy, the product is the most important part of the marketing mix strategy. When considering a product or service from a marketing perspective, "price" refers to the monetary unit or other measure (including interest and other services) paid in return for the right to own or use the product or service (F. Tjiptono 2008). Then promotion is also an activity that plays an important role. In marketing, promotion is a one-way flow of information or persuasion intended to direct a person or organization to take an action that will result in an exchange (Herlambang 2014). Place also has an important influence on consumers when making purchasing decisions. And no less important is the distribution channel, which refers to marketing operations aimed at expediting and facilitating the supply of goods and services from producers to consumers, so that their application is in accordance with what is needed (type, quantity, price, place and if needed) (F. Tjiptono 2008).

Bondowoso Regency is a region that has abundant natural resources. Java Ijen-Raung Arabica Coffee is a specialty coffee produced in Bondowoso Regency, East Java Province. In Sumberwringin District, it is one of the most important coffee production centers in Bondowoso Regency. The agro-industry produces a variety of processed coffee, including green bean coffee, roasted coffee, and ground coffee. The coffee is sourced from a plantation located in Sukorejo Village, which is located in Sumberwringin District, Bondowoso Regency. Owner of UD. Matt Coffee has an initiative to realize this agro-industry to improve the welfare of smallholder coffee farmers in Sumberwringin District. This is because the stages of buying and selling fresh coffee fruit are considered not profitable and do not have added value. The following is Arabica Coffee Sales Data UD. Matt Coffee 2015-2019:

Table 1. Sales Data of Arabica Coffee UD. Matt Coffee 2015-2019

No	Tahun	Penjualan Kotor
1.	2015	Rp 251.100.000
2.	2016	Rp 271.080.000
3.	2017	Rp 282.360.000
4.	2018	Rp 314.700.000
5.	2019	Rp 339.840.000

Source : UD. Matt Coffee

According to table 1 it shows that the sales of Arabica Coffee UD. Matt Coffee experienced an increase but not significant, based on observations made by researchers at UD. Matt Coffee. Customer appreciation for the quality of Arabica Coffee UD. Matt Coffee's products high level can be seen from the increase in the company's sales. The production of Arabica coffee is not comparable to Matt Coffee for several reasons, including the lack of raw materials used and the limited number of personnel. Therefore, the production of coffee produced for product supply is still limited to meet market demand which is not yet known with certainty.

In this regard, UD. Matt Coffee must be able to pay attention to the strategic processes involved in product evaluation, including carrying out studies related to marketing progress through product life cycle analysis (Product Life Cycle). This is done so that the sales of UD. Matt Coffee to continue their upward trend and for the company to maintain its ability to compete well with its competitors. In the process of developing its business, UD. Matt Coffee came to the conclusion that the implementation of a marketing system has not been as successful as it should have been, especially related to the idea of the Product Life Cycle and the company's product focus strategy. Therefore this study has a focus on analyzing the position of UD Arabica Coffee products. Matt Coffee through the Product Life Cycle (PLC) approach according to the Polli and Cook method with the aim of determining and analyzing marketing strategies when developing his business based on the Product Life Cycle (PLC) on UD Arabica Coffee products. Matt Coffee.

2. Literature Review

2.1. Strategy

(Kuncoro 2005) defines strategy as the company's business leaders realizing their philosophy. Meanwhile, Itami in (Kuncoro 2005) states that strategy is determining the framework of the company's business activities and providing guidelines for coordinating activities so that the company can adapt and influence the ever-changing environment. Strategy is a series of integrated and coordinated commitments and actions designed to exploit core competencies and gain competitive advantage (Hitt 2001). Meanwhile (P. Kotler 1995) states that strategy is an outline of action to achieve business goals.

2.2. Marketing

(Kotler and Armstrong 2008) defines that marketing is a process by which companies create value for customers and build strong relationships with customers with the aim of capturing value from customers in return. Meanwhile, the American Marketing Association (Kotler and Keller 2009) defines marketing as an organizational function and a series of processes for creating, communicating, and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders. (P. Kotler 2004) states that marketing is a

social process in which individuals and groups obtain what they need and want by creating, offering and freely exchanging products of value with other parties. Meanwhile (B. H. Swastha 2000) explain that marketing is an overall system of business activities aimed at planning, determining prices, promoting and distributing goods and services that can satisfy the needs of both existing and potential buyers.

Based on the above understanding, it is simply concluded that marketing is the process of building profitable customer relationships by creating value for customers and capturing value back from customers.

2.3. Product Life Cycle Concept

(Kotler and Armstrong 2008) defines the Product Life Cycle as the path that will be taken by product sales and profits throughout its life. Which has four different stages, namely product introduction, product growth, product maturity, and product decline. The Product Life Cycle concept can be applied by marketers as a useful framework for describing how product and market mechanisms work (Kotler and Armstrong 1996). Meanwhile (P. Kotler 1995) the concept of Product Life Cycle affects decision making and is a powerful tool in strategy implementation. The conclusion from the opinion above, that the Product Life Cycle approach is an important tool for making decisions in formulating marketing strategies.

3. Methodology

The research presented here is both descriptive and qualitative. Along with direct interviews, observations, and available data, the PLC analysis method is used in the process of determining the marketing plan. The data source is primary data for research, namely conducting interviews with UD. Matt Coffee owners as an informant or resource person, conducted interviews with UD. Matt Coffee employees, as well as carrying out direct observations in the field. Secondary data includes an overview of UD. Matt Coffee in Sukorejo Village, Sumberwringin District, Bondowoso Regency and UD. Matt Coffee sales data in Sukorejo Village, Sumberwringin District, Bondowoso Regency. Descriptive qualitative, namely the type of research by applying the PLC method to determine marketing strategies. Collecting data through interview techniques, observation and documentation. The research focus is the marketing strategy of UD. Matt Coffee in Sukorejo Village, Sumberwringin District, Bondowoso Regency. Data collection techniques used in this research by interviews, observation and documentation. The analytical method that will be used in this study is the Polli and Cook method to determine the position of UD Arabica Coffee products. Matt Coffee based on product life cycle (PLC).

4. Result and Discussion

4.1 Result

The Polli and Cook method can be used to perform the calculations needed to establish the product life cycle. The first step that must be known is the data on the change in the percentage of the company's revenue from year to year at a certain period of time as long as the product enters the market until now, in this case the sales data entered is sales data for the last 5 years. The phase that is being experienced by UD. Matt Coffee can be determined based on revenue or income from UD. Matt Coffee using the Polli and Cook method. The following is sales data of UD. Matt Coffee 2015-2020.

Table 2. Sales Data of Arabica Coffee UD. Matt Coffee 2015-2019

No	Year	Gross Sales	Percentage (%) (X)	X - μ	(X - μ) ²
1.	2015	Rp 251.100.000	0	-	-
2.	2016	Rp 271.080.000	7,95	0,06	0,0036
3.	2017	Rp 282.360.000	4,16	(3,73)	13,9129
4.	2018	Rp 314.700.000	11,45	3,56	12,6736
5.	2019	Rp 339.840.000	7,98	0,09	0,0081
Total			31,56		26,5982

Source : UD. Matt Coffee

From table 2 it can be seen that the sales of products produced by UD. According to research findings conducted at UD. Matt Coffee, there is a tendency for individuals to show symptoms of improvement. This is evidenced by the consistent flow of orders from customers from within Bondowoso Regency and from outside the city, such as Jember and Situbondo. Because UD. Matt Coffee expects to receive a significant number of orders, the company manufactures their product in large quantities so that they can stockpile some if the number of orders continues to increase. There are times when there is no more inventory in the warehouse, even though the customer continues to order products.

With an average total value of the percentage of sales per year (μ), namely:

$$\mu = \frac{\sum X}{n - 1}$$

$$\mu = \frac{31,56}{5 - 1}$$

$$\mu = 7,89$$

The next is the percentage of sales per year (X) is reduced by the total average of the percentage of sales per year (μ), and is squared to obtain the standard deviation value (σ)

$$\sigma = \sqrt{\sum(X - \mu)^2}$$

$$\sigma = \sqrt{26,5982}$$

$$\sigma = \sqrt{26,5982}$$

$$\sigma = 5.1573$$

In order to find out the Z and X values in the normal curve of the UD. Matt Coffee product menu, obtained through calculations applying the formula namely:

$$Z = \mu + 0.5 \sigma$$

$$Z = 7.89 + 0.5 (5.15)$$

$$Z = 13.465$$

$$\begin{aligned} \text{Growth limit (growth)} &= \mu + 0.5 \sigma \\ &= 13.465 \\ Y &= \mu - 0.5 \sigma \\ Y &= 7.89 - 0.5 (5.15) \\ Y &= 5.315 \end{aligned}$$

$$\begin{aligned} \text{Decline Limit} &= \mu - 0.5 \sigma \\ &= 5.315 \end{aligned}$$

The standards obtained from this procedure will be entered in the formula:
 $-0.5 \sigma < x < 0.5 \sigma$

If the product has an average sales lower than -0.5σ , then it is possible to classify it as another product that is in the decline stage of its life cycle. Meanwhile, values of x that are separated by more than $+0.5 \sigma$ are considered different in developing situations. In the mature stage, the x values that fall within this range are classified differently, and the stages are further divided into decaying mature (for values with a negative sign) and sustained mature (for positive values).

According to calculations using the Polli and Cook method, it can be seen that the total value of the percentage change in sales or $\Sigma\Delta\% (X)$ is 31.56. The limitations for setting stages in the product life cycle according to Polli and Cook's calculation statement are:

$$\text{Decline} : \Sigma\Delta\% (X) < 5,315$$

$$\text{Growth} : \Sigma\Delta\% (X) > 13,465$$

$$\text{Mature} : 5,315 < \Sigma\Delta\% (X) < 13,465$$

Growth Stage (growth) : $\Sigma\Delta\% (X) = 31,56 > 13,465$

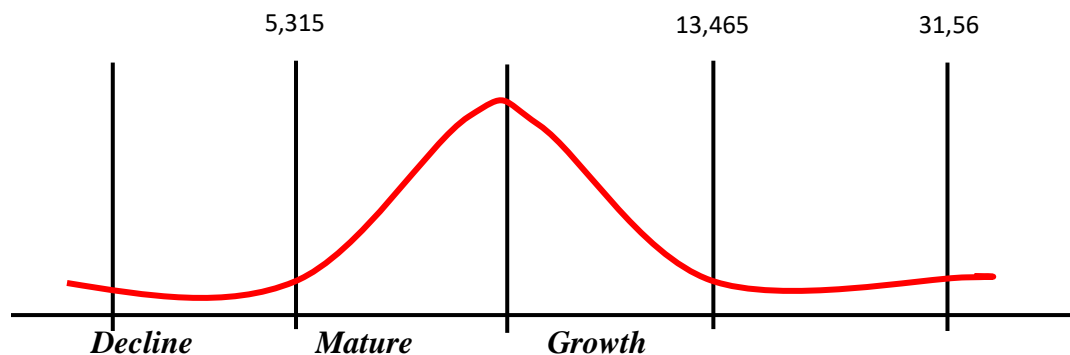


Figure 1: Product Life Cycle Stages of UD. Matt Coffee
 Source: Processed Data 2022

4.2 Discussion

4.2.1 Position of Arabica Coffee Products UD. Matt Coffee Through Product Life Cycle (PLC) Approach

Based on Figure 1 and Product Life Cycle (PLC) analysis, it can be seen that UD. Matt Coffee at the stage of growth (growth). At this stage sales and profits are increasingly felt, product growth increases rapidly, so that UD. Matt Coffee gets profit from the business he has started. However, this phase also needs to be watched out for, because products that are already known by the market will make competitors enter the UD. Matt Coffee market which can create competition. This competition must be addressed by strengthening the position of products in the eyes of customers, strengthening the organization and expanding distribution channels.

4.2.2 Marketing Strategy Used based on Product Life Cycle (PLC) Analysis

In order to facilitate understanding of the analysis of each problem formulation, the author shows that the analysis includes a matrix, namely:

Table 3: PLC (Product Life Cycle) Matrix of UD. Matt Coffee Bondowoso

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Life cycle analysis about product	The stage of development of the management of UD. Matt Coffee has succeeded in developing various types of processed coffee from the introduction stage which is only one type, now the owner has succeeded in innovating and adding what is needed and demanded by consumers.
Life cycle analysis about price	In setting the price of the coffee products sold, the owner sets the price based on the cost of raw materials and production, and also adjusts it to market prices. This indirectly affects the interest of consumers so they can have an interest in purchasing a product. The selling price of coffee varies, including for various types of Arabica coffee, which is between Rp. 90,000 to Rp. 500,000 /kilogram, on the other hand for various types of robusta coffee, which is between Rp. 50,000 to Rp. 100,000 /kilogram.
Life cycle analysis about place	The distribution channel carried out by UD. Matt Coffee in distributing its coffee products has now penetrated into various areas of Bondowoso, Situbondo, Banyuwangi, Surabaya, Yogyakarta, Semarang, and foreign. This distribution expansion effort was chosen by UD. Matt Coffee to get a place in the hearts of consumers
Life cycle analysis about promotions	<p>a. Direct Marketing</p> <p>The promotion carried out by UD. Matt Coffee, namely by communicating directly with consumers to explain product details. And also opening outlets with the hope that they will be specifically targeted to get an immediate response. This proves that direct promotion aims to get interaction in making purchases.</p> <p>b. Public relations</p> <p>Establish good relations with the surrounding community, in order to gain support and a good image in the business and get rid of negative issues and</p>

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things that can harm the business.

c. Advertising

The advertising promotion system carried out at UD. Matt Coffee uses a promotion system by participating in bazaar events and also through social media including Facebook, Whatsapp and Shopee.

Source: Processed Data, 2022.

The strategy carried out by UD. Matt Coffee Bondowoso based on its position in the product life cycle, namely:

1. Provide a place for students majoring in agriculture to practice the skills they learn at their respective vocational schools through collaborative efforts with these schools. Because of that, the initiative ended up functioning more like a promotional media among schools.
2. Providing messaging services to users by utilizing internet media. Initially, there was a delivery service that could be accessed by calling the company's own number. However, the company then introduced online services by utilizing internet applications for online taxis. Then, it will be easier for customers to appreciate the products manufactured by UD. Matt Coffee Bondowoso.
3. Receive production visits from various local communities and companies. This visit was organized so that customers could see the production process for themselves and ask questions related to UD. Matt Coffee Bondowoso. Consumers will be able to see and learn about the manufacturing process in this way, which will increase their trust in the product and their level of enjoyment of it. In addition, visitors will be able to tell other consumers about the profiles of products they are familiar with.

During the expansion stage, a company has various options to sustain its fast market growth:

1. The company works to improve the overall product quality, as well as to add new product features and improve the overall aesthetic.
2. The company has introduced several new items, including fighters and flankers (for example, products with different sizes, flavors and other features that protect the main product)
3. The company enters a new market segment.
4. The company expanded its distribution coverage and entered new distribution channels
5. Companies shift their focus from advertising to increase product awareness to advertising to increase product preference.
6. Companies reduce their prices to take price-conscious customers to the next level.

5. Conclusion

In accordance with the results of the analysis and discussion that the researcher has described so that conclusions can be drawn, namely based on the results of the study it shows that at the

growth stage (growth) through the Product Life Cycle approach at UD. Matt Coffee Bondowoso. The growth stage is shown by fast market acceptance and substantial profit increase UD. Matt Coffee Bondowoso. And based on the results of the research, it shows that the strategy carried out by UD. Matt Coffee Bondowoso is in accordance with its position in the product life cycle, namely UD. Matt Coffee Bondowoso explores innovative strategies to maintain and even increase sales growth which includes market, product and marketing mix modifications.

6. Suggestion

The suggestions put forward are UD. Matt Coffee needs to work on improving the quality of their Arabica coffee products to be more consistent where consumers can feel very satisfied with the taste of Arabica coffee UD. Matt Coffee Bondowoso. UD. Matt Coffee needs to pay extra attention to ensure the resulting roasted coffee beans have a softer texture when brewed. And UD. Matt Coffee needs to find further the distinctive taste of Arabica coffee besides the Arabica coffee taste UD. Matt Coffee Bondowoso is bitter, sweet and sour and light.

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REFERENCES

- Agustina, F. d. (2012). Perumusan Strategi Pengembangan Produk Kurma Salak Berdasarkan Analisis Product Life Cycle (PLC) dan SWOT Pada Kelompok Tani Ambudi Makmur II Bangkalan. *Jurnal Inovasi dan Kewirausahaan Vol.1, No.2*, 105-112.
- Assauri, S. (1996). *Manajemen Pemasaran; Dasar, Konsep dan Strategi*. Jakarta: PT. Raja Grafindo Persada.
- Assauri, S. (2004). *Manajemen Pemasaran: Dasar, Konsep, dan Strategi Edisi 1 Cetakan 7*. Jakarta: PT. Raja Grafindo Persada.
- Assauri, S. (2013). *Manajemen Pemasaran*. Jakarta: Rajawali Persada.
- Conita. (2008). Analisis Daur Hidup Produk (Product Life Cycle) Tabungan iB Plus dan Penetapan Strategi Pemasaran Pada PT. BNI Syariah. Tbk. *Skripsi*.
- Dalimunthe, R. F. (2020, Mei). Analisis Daur Hidup Produk (Product Life Cycle) Bihun Tapioka di Provinsi Lampung. *JIIA*, Vol.8 No.2.
- Fatimah, F., & Tyas, W. M. (2020). P-ISSN:2459-9921 E-ISSN:2528-0570245JURNAL PENELITIAN IPTEKS VOStrategi Bersaing UMKM Rumah Makan Di Saat Pandemi Covid 19. *Jurnal Penelitian IPTEKS*, 245-253.
- Fitri, N. (2017). Penentuan Strategi Pemasaran Untuk Meningkatkan Penjualan Produk Yoghurt Dengan Pendekatan Product Life Cycle. *Skripsi*.
- Foster, D. W. (2000). *Manajemen Perusahaan*. Jakarta Pusat: Erlangga.
- Fuad, T. (2020). Pengembangan Kopi Bubuk Cap Paristo Liberika Dalam Meningkatkan Penjualan Pada Kedai Gerai UMKM Mekar Jaya. *Skripsi*.
- Glueck, W. F., & Jauch, L. R. (2012). *Manajemen Strategi & Kebijakan Perusahaan Edisi 3*. Jakarta: Erlangga.
- Herlambang, S. (2014). *Cara Mudah Memahami Ilmu Pemasaran*. Yogyakarta: Gosyeng Publishing.

- Hitt, M. A. (2001). *Manajemen Strategis: Daya Saing dan Globalisasi Konsep Buku 1*. Jakarta: Salemba Empat.
- Junianta, R. D. (2019). Perbandingan Siklus Hidup Produk Dota 2 dan CS: GO Berdasarkan Strategi Event Marketing. *Riset Manajemen Sains*, Vol.10, No.1.
- Kasmir. (2003). *Manajemen Perbankan*. Jakarta: PT. Raja Grafindo Persada.
- Kinney, K. (1990). *Pengantar Metode Riset Sosial*. Bandung.
- Kotler, & Armstrong. (2011). *Marketing an Introduction*. Jakarta: Perason.
- Kotler, P. (1995). *Manajemen Pemasaran; Analisis, Perencanaan, Implementasi dan Pengendalian Edisi 8 Jilid 1*. Jakarta: Salemba Empat.
- Kotler, P. (2004). *Manajemen Pemasaran; Analisis, Perencanaan, Implementasi dan Kontrol*. Jakarta: Prenhallindo.
- Kotler, P., & Armstrong, G. (1996). *Dasar-Dasar Pemasaran*. Jakarta: Prenhallindo.
- Kotler, P., & Armstrong, G. (2008). *Prinsip-Prinsip Pemasaran Edisi 12 Jilid 1*. Jakarta: Erlangga.
- Kotler, P., & Keller, K. L. (2009). *Manajemen Pemasaran, Edisi 13 Jilid 1*. Jakarta: Erlangga.
- Kuncoro, M. (2005). *Strategi Bagaimana Meraih Keunggulan Kompetitif*. Jakarta: Erlangga.
- Mamentu, S. V. (2018). Analisis Strategi Bauran Pemasaran Berdasarkan Posisi Siklus Hidup Produk Smartphone Samsung di Kota Manado. *Jurnal Administrasi Bisnis*, Vol.7 No.1.
- Manap, A. (2016). *Revolusi Manajemen Pemasaran*. Jakarta: Mitra Wacana Media.
- Nasution, A. H. (2006). *Manajemen Industri*. Yogyakarta: Andi.
- Polli, R., & Cook, V. (1969). Validity of Product Life Cycle. *Journal of Business* Vol.42 No.4.
- Qomariah, N. (2016). *Marketing Adaptive Strategy*. Jember: Cahaya Ilmu.
- Rahmah, A., Fitri, Y., & Oktari Ulma, R. (2017). Strategi Pemasaran Dodol Rosela Pada Agroindustri “Adsari” Berdasarkan Product Life Cycle (Plc) Di Kota Jambi. *Jurnal Ilmiah Sosio-Ekonomika Bisnis*, Vol.20, No.2.
- Rahmah, M. (2017). Pengembangan Produk Kopi Bubuk Cap Semut Dalam Meningkatkan Penjualan Ditinjau Dari Perspektif Ekonomi Islam Pada Kelompok Wanita Tani Melati. *Skripsi*.
- Rahmah, U. A. (2019). Strategi Promosi dan Pengembangan Produk Kopi Mahkota Raja Blend Doa Sesuai pernyataan Pemasaran Perspektif Islam Di Pondok Pesantren Mukmin Mandiri Waru Sidoarjo. *Skripsi*.
- Rangkuti, F. (2006). *Analisis SWOT Teknik Membelah Kasus Bisnis*. Jakarta: Gramedia Pustaka Utama.
- Santoso, G. (2005). *Metodologi Penelitian Kuantitatif dan Kualitatif*. Jakarta: Prestasi Pustaka Publisher.
- Santoso, I. (2016). Integrasi Analisis Product Life Cycle dan Metode AHP-TOPSIS Dalam Perumusan Strategi Pengembangan Produk. *Teknologi Industri Pertanian*, Vol.26, No.2, Hal.227-235.
- Sari, I. P. (2020). Strategi Pemasaran Berdasarkan PLC dan SWOT Sebagai Upaya Peningkatan Penjualan Produk Pada UKM Tahu (Pada UKM Tahu Mudji dan UKM Tahu Hosen Kecamatan Sukowono). *Skripsi*.
- Sugiyono. (2012). *Metode Penelitian Kuantitatif dan Kualitatif dan R&D*. Bandung: Alfabeta.
- Swastha, B. H. (2000). *Manajemen Pemasaran Analisis Perilaku Konsumen*. Yogyakarta: BPF.
- Swastha, B. I. (1986). *Manajemen Pemasaran Modern*. Yogyakarta: Liberty Yogyakarta.
- Tjiptono, F. (2008). *Strategi Pemasaran*. Yogyakarta.
- Tjiptono, F. (2012). *Strategi Pemasaran Edisi 3*. Yogyakarta: Andi.
- Umar, Z. A. (2010, September). Analisis Daur Hidup Produk (Product Life Cycle) Produk Ikan Tuna Olah (Suatu Penelitian di PT. Betel Citra Seyan Gorontalo). *INOVASI*, Vol.7 No.3.
- Wind, Y. (1992). *Product Policy: Concept, Methods and Strategy*. Addison-Wesly Publishing Co.