

## **Sambal Roa Innovation: A Traditional Culinary Business Opportunity in Sidoarjo, Indonesia**

**Anatasya Angelina<sup>1</sup>, Siti Aisyah<sup>2</sup>, Umi Nur Hastuti<sup>3</sup>**

<sup>123</sup>Universitas PGRI Delta Sidoarjo

siti.aisyah.yes@gmail.com<sup>2</sup>

### **ABSTRACT**

*This study explores the potential of sambal roa as an innovative culinary product in Sidoarjo, Indonesia. Sambal roa, made from smoked roa fish and local spices, offers a unique flavor that aligns with the rising consumer interest in practical and authentic spicy condiments. Using a qualitative method involving observations and surveys in local markets, the study analyzes consumer awareness, taste preferences, and purchase intentions. Findings reveal a strong interest in sambal roa among Sidoarjo consumers, particularly those aged 20–50, due to its practicality, distinctive aroma, and spicy savory flavor. The study concludes that sambal roa has strong potential to compete in both local and broader markets, especially with proper branding and digital marketing strategies.*

**Keywords:** *sambal roa, innovation, traditional culinary bussiness*

### **INTRODUCTION**

The culinary industry in Indonesia is developing rapidly in line with the increasing public preference for authentic food (Harahap et al., 2022; Subur, 2024). One highly favored category is spicy food, which has become an inseparable part of Indonesia's culinary tradition. However, amid this culinary richness, Sidoarjo still lacks an iconic fish-based sambal that could become a regional hallmark.

Sidoarjo has significant potential to develop sambal roa, originally from North Sulawesi. This sambal is made from smoked roa fish and processed with distinctive spices, resulting in a savory, spicy taste, and a unique smoky aroma. To date, there has not been a popular fish-based sambal in Sidoarjo, although the community shows a high preference for spicy foods.

The urgency of this issue lies in the lack of local culinary innovation based on fish in Sidoarjo, even though the market potential for fish-based sambal is substantial. Until now, there has not been a popular fish-based sambal in the region, despite the community's high preference for spicy culinary products. Additionally, the lack of education and promotion about sambal roa means that many consumers in Sidoarjo are still unfamiliar with this product, resulting in low awareness of the uniqueness and potential flavor of sambal roa. This situation creates both challenges and opportunities to introduce sambal roa as a culinary innovation that can meet market needs.

The business opportunity offered by sambal roa is promising, considering modern lifestyle trends that prioritize practicality and uniqueness in culinary products. Hygienically and practically packaged sambal roa can be an attractive option, especially for busy consumers who still want to enjoy quality food. Moreover,

variations in spiciness levels and easy processing enable sambal roa to reach various consumer segments, from those who prefer mild spiciness to those seeking a stronger spicy sensation. With appropriate marketing strategies, sambal roa has the potential not only to be recognized in the local Sidoarjo market but also to compete in national and global markets.

Innovation in the making of sambal roa is also a main added value that can attract consumer attention. The use of smoked roa fish provides a rich and authentic taste, differentiating it from other traditional sambals. Additionally, its practical serving method makes it highly suitable for modern consumers who desire easily enjoyed culinary products without losing authentic flavors. Sambal roa can also be further developed by creating product variations, such as sambal roa with specific additional spices or versions more suited to local tastes in Sidoarjo.

This research aims to introduce sambal roa to the Sidoarjo community by analyzing market trends, consumer needs, and product acceptance potential. Direct observations were conducted at several food selling points and culinary markets in Sidoarjo to understand community preferences for sambal and their willingness to try new products. Consumer surveys were also conducted to collect data on their taste preferences for spicy sambal, their willingness to purchase sambal roa, and the extent of their knowledge about this product. Through this approach, sambal roa is expected to become an innovative solution that not only attracts consumer interest in Sidoarjo but also opens up new business opportunities in the culinary sector.

By introducing sambal roa as a flagship culinary product, Sidoarjo has the opportunity to develop a new identity in the sambal industry. Sambal roa not only offers a unique and authentic taste but is also able to meet the needs of consumers seeking practical, hygienic, and high-quality products. Through innovation in processing, marketing, and distribution, sambal roa can become a competitive culinary product amid the growing trend of spicy foods, making it a promising business opportunity both locally and globally.

## **LITERATURE REVIEW**

In the rapidly developing business world, innovation is one of the keys to success, especially in responding to changing tastes and consumer needs. In the era of globalization, people's tastes and preferences continue to change due to the influence of culture, technology, and lifestyle (Subur, 2024). One sector highly affected by this dynamic is the culinary industry, which not only trends in society but also contributes significantly to economic growth (Harahap, Muthe, & Lubis, 2022). Traditional food plays a vital role in shaping cultural identity as it represents the values, flavors, and local traditions (Kusumawati & Suryani, 2019) of a society by showcasing distinct flavors and traditions. However, traditional food must be adapted to remain relevant and appealing in an increasingly competitive modern era.

Traditional cuisine is an essential element of a region's cultural identity. According to Kusumawati and Suryani (2019), traditional cuisine reflects local wisdom through ingredients, processing techniques, and distinctive flavors passed down through generations. However, to remain relevant amid competition and

lifestyle changes, traditional cuisine must adapt. Transforming traditional cuisine into more practical products suited to modern consumer needs is one form of innovation. For example, sambal roa from Manado, processed and packaged practically to reach a wider market, such as the Sidoarjo community. This adaptation enables traditional cuisine to survive while also meeting the ever-growing market demand.

Innovation in food products not only involves creating something new but also enhancing the value of existing products. Amabile et al. (1996) define innovation as the successful application of creative ideas to generate new products or processes. In the culinary context, innovation may include developing new flavors, more attractive and hygienic packaging, and adjusting spiciness levels to meet consumer preferences. In the case of sambal roa, the product is an innovation because it utilizes local raw materials not commonly found elsewhere, namely smoked roa fish. Its spicy, savory taste and distinctive smoky aroma set it apart from other traditional sambals. Moreover, the product becomes more suited to modern lifestyles thanks to innovation in packaging and marketing, such as through e-commerce platforms.

According to Uncles in Supranoto (2009), it is crucial to have a profound understanding of market needs and preferences in product development and business strategies. Analyzing the preferences of local consumers in Sidoarjo, who tend to favor traditional sambals such as sambal terasi and sambal bawang, is essential. To address this, a differentiation strategy emphasizing the unique flavor of sambal roa and educating consumers on its benefits and practicality becomes highly important.

Market orientation is a crucial approach in facing competition in the culinary industry. Uncles (2000) in Supranoto (2009) explains that market orientation is the process of creating and satisfying customers through a deep understanding of their needs and desires. For sambal roa ventures, market orientation can be realized through consumer preference surveys, market trend analyses, and product development tailored to local tastes in Sidoarjo. By understanding consumer needs, products can be designed to attain higher competitive advantage.

## **RESEARCH METHOD**

### ***Research Design: Qualitative***

This study employs a descriptive qualitative approach, aiming to explore the innovation potential of sambal roa as a signature culinary product in Sidoarjo. This approach emphasizes the collection of descriptive data through field observations and surveys to understand local consumer perceptions, preferences, and interest in sambal roa.

### ***Research Location: Culinary markets in Sidoarjo***

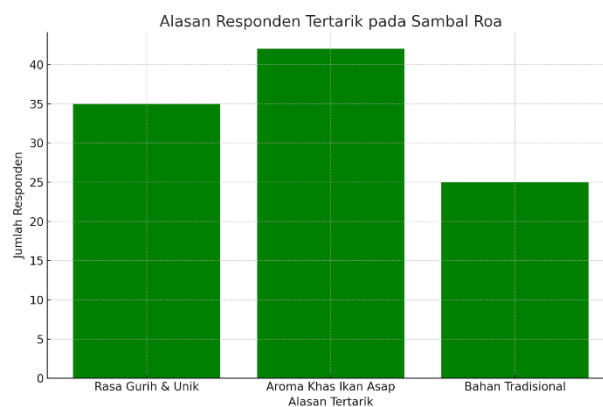
The research was centered in the Sidoarjo area, particularly culinary markets, MSME markets, and other locations that serve as centers of community consumption activities. The selection of locations was based on their accessibility within the Sidoarjo UMKM markets and the consideration that Sidoarjo residents tend to favor spicy foods and have great potential to accept sambal roa products.

## ***Participants: Local consumers (youth to adults)***

The research sample comprised local consumers in Sidoarjo aged 20–50 years. This age group was selected based on the average age in the questionnaire and their potential as the main target market for sambal roa products. Purposive sampling was used to ensure the sample covered diverse consumer preferences for spicy foods

## ***Data Collection: Survey & Observation***

Data collection was conducted through several techniques, namely, by observing culinary (UMKM) markets in Sidoarjo to record consumption patterns and consumer interest in sambal roa products. Surveys were also conducted by distributing questionnaires to consumers to collect demographic data (such as age), their level of interest, and their attraction to sambal roa products. Semi-structured interviews were conducted to deepen the understanding of factors influencing consumer preference and purchase intentions for sambal roa, as well as to explore factors influencing their perceptions and purchase decisions. Information obtained included reasons for consumer interest, such as the unique flavor of smoked roa fish and attractive, practical packaging.



## **Consumer awareness level**

## **RESULTS AND DISCUSSION**

### ***Market Needs and Customer Preferences***

The culinary market in Sidoarjo shows a high public interest in spicy cuisine, as sambal is a daily staple consumed as a food complement. Based on the results of the questionnaire, the majority of respondents showed positive interest and responses to the new culinary product sambal roa due to its unique flavor from smoked roa fish, which has a distinctive aroma, savory spicy taste, ready-to-serve quality, and practical, attractive packaging—making it highly suitable for Sidoarjo residents' daily food needs.

Generally, consumer responses regarding taste were positive, with respondents mentioning that this sambal provides a new culinary experience with a unique flavor and characteristic smoky aroma. From a packaging standpoint, the use of hygienic and practical plastic bottles was considered an added value.

In terms of marketing, respondents suggested wider dissemination and marketing through UMKM markets and online platforms (e-commerce), and even recommended providing testers to attract consumers to try sambal roa.

### ***Product Positioning: Sambal Roa in Sidoarjo Market***

In the Sidoarjo market, sambal roa a specialty from Manado combining spiciness with the aroma of smoked roa fish has significant potential to be positioned as an innovative culinary product. Sambal roa can highlight its unique taste as a primary selling point in its positioning strategy, as this unique taste is rarely found in local Sidoarjo sambal products and has not been found in distinctive fish-based sambals. The smoky flavor of roa fish distinguishes it from traditional Sidoarjo sambals. Moreover, attractive and practical packaging facilitates storage and use, aligning with the urban population's need for practicality. The main target market is individuals aged fifteen to fifty who enjoy spicy and practical food. This segmentation is based on customer preferences for sambal with distinctive flavor and convenient packaging. Furthermore, according to Maslow's hierarchy of needs (1943), consuming sambal roa can fulfill taste (self-actualization) and convenience (safety) needs, especially for customers seeking to diversify their daily meals. With the right positioning strategy, sambal roa has great potential to be accepted and thrive in Sidoarjo's culinary market, meeting consumer demand for practical and unique sambal products.

### ***Challenges and Opportunities in Product Introduction***

As an innovative product based on smoked roa fish, sambal roa faces several challenges during its introduction to the Sidoarjo market. One main challenge is the lack of public awareness in Sidoarjo about this product. Based on observations and surveys, most Sidoarjo residents have heard of but are not familiar with sambal roa, as it is not an indigenous product of their region.

However, this challenge also presents significant opportunities. Sambal roa has a distinctive flavor not found in other traditional sambals, namely a blend of spicy, savory, and the unique smoky aroma of roa fish. Moreover, the trend of consuming unique and exotic spicy foods at the national and even global level represents a substantial opportunity for sambal roa to expand its market beyond Sidoarjo. The product's practicality, with ready-to-serve packaging, also makes it a suitable solution for modern lifestyles, especially for busy consumers. Another opportunity is the increasing trend of innovative culinary products that offer new experiences, such as sambal roa, which can attract consumer attention in Sidoarjo.

### ***Comparison with Previous Culinary Business Models***

Sambal roa can be compared to other traditional culinary business models in Sidoarjo, such as traditional sambal businesses based on chili and shrimp paste. Traditional sambal business models usually rely on local recipes that are widely recognized by the community. These products are often sold in simple forms and marketed through conventional strategies, such as direct sales in traditional markets.

For instance, Sidoarjo's signature shrimp paste sambal is sold by local MSMEs in traditional markets at affordable prices and without modern packaging.

Conversely, sambal roa as a culinary innovation offers added value through the use of smoked roa fish, which is uncommon in Sidoarjo. This product also has the potential for modern marketing, such as through e-commerce platforms and social media. Additionally, sambal roa can be developed with various flavors and spiciness levels to meet broader consumer preferences, something rarely found in traditional sambal business models. Another competitive advantage of sambal roa is its flexibility in collaborating with digital platforms and modern lifestyle trends. For example, sambal roa can be promoted via social media to introduce the product to younger generations. Modern lifestyle trends that prioritize practicality and product quality also provide a competitive edge for sambal roa. With the right marketing strategy, sambal roa can compete with other local sambal products and even expand its market reach to the national level.

### ***Strategic Recommendations for Branding and Marketing***

To increase the appeal and acceptance of sambal roa in the Sidoarjo market, several branding and marketing strategies are necessary. First, enhancing product education is crucial, given the low level of local consumer awareness about sambal roa. Emphasizing its unique taste and practicality can be achieved through social media, promotional videos, and marketing the product at local culinary markets. Second, developing various flavors and spiciness levels—such as sweet and spicy sambal roa or extra spicy sambal roa—aims to attract a wider range of consumers, from those who prefer mild spiciness to fans of extremely spicy food. To attract new consumers, offering free samples (testers) in culinary markets can be an effective strategy, allowing consumers to try the product before purchasing and thereby increasing purchase opportunities. Lastly, using attractive, hygienic, and practical packaging can add value to the product. The use of plastic bottles, glass jars, or single-use cans that are easy to use and store matches the needs of modern consumers.

Furthermore, packaging can also include nutritional information and serving suggestions to increase appeal for health-conscious consumers. By implementing these strategies, sambal roa can build a strong brand image and improve its competitiveness in the Sidoarjo culinary market. This step will also help the product be accepted as part of an innovative local culinary identity.

### ***Estimation Cost***

The estimation of production costs is a crucial component in assessing the financial feasibility and sustainability potential of a culinary product innovation, including sambal roa. This cost estimation for sambal roa production is based on local market price surveys in Sidoarjo for raw materials, packaging, and other operational costs. Table 2 presents the detailed estimated production costs of sambal roa per unit of production or per specific period (e.g., production batch or per month, needs to be clarified).

**Table Estimated Production Costs**

No.	Item Category	Item Name	Quantity	Unit	Estimated Cost (Rp)
A.	Raw Materials				
1.		Smoked Roa Fish	1	packet(20pcs)	66,000.00
2.		Chili (Cabai Rawit)	500	gram	32,000.00
3.		Chili (Cabai Merah)	250	gram	7,500.00
4.		Tomato	1	kg	27,500.00
5.		Red Onion	250	gram	16,000.00
6.		Garlic	100	gram	5,000.00
7.		Cooking Oil	1	liter	22,000.00
8.		Herbs and Spices	1	packet	9,000.00
		<b>Subtotal Raw Materials</b>			<b>186,000.00</b>
B.	Packaging & Labels				
1.		Packaging Materials	15	pcs	37,500.00
2.		Label Sticker	15	pcs	7,500.00
		<b>Subtotal Packaging &amp; Labels</b>			<b>45,000.00</b>
C.	Utilities				
1.		LPG Gas	1	cylinder	20,000.00
2.		Electricity & Water Bill	1	month	100,000.00
		<b>Subtotal Utilities</b>			<b>120,000.00</b>
		<b>GRAND TOTAL</b>			<b>380,000.00</b>

Based on Table, the total estimated production cost of sambal roa is Rp380,000.00. The cost breakdown shows that the "Raw Materials" category has the largest proportion in the cost structure, followed by "Utilities" and "Packaging & Labels". Raw material costs, especially smoked roa fish, are a dominant component, indicating that fluctuations in raw material prices can significantly affect total production costs. Utility costs, particularly electricity and water, are also significant expenses that need to be considered in a larger production scale. Understanding this

cost structure is very important for setting competitive selling prices and ensuring healthy profit margins. With this estimated production cost, businesses can conduct a break-even analysis to determine the minimum sales volume required to avoid losses. In addition, this cost information can also be a basis for identifying areas where efficiency can be improved, for example through negotiations with raw material suppliers or optimizing energy use. This is in line with operational management principles that aim to minimize costs without sacrificing product quality (Porter, 2020). Accurate cost estimation forms a strategic foundation for the sustainability of the sambal roa business in a competitive market

## **CONCLUSION**

The results of this study found that sambal roa, as an innovative culinary product made from smoked roa fish, received positive responses from consumers in Sidoarjo, especially those in the 20–50 age group who enjoy spicy and practical dishes. Most respondents from the survey were interested in the unique taste and distinctive aroma of smoked roa fish, as well as the hygienic and attractive packaging. Although the initial awareness of this product was relatively low, as it is not originally from Sidoarjo, sambal roa has great potential to be accepted, especially given the growing trend of consuming spicy and innovative foods. Sambal roa also has advantages over local traditional sambal in terms of unique flavor, practical packaging, and digital marketing potential.

Based on the research findings, there are several suggestions for business actors and further culinary product development. First, increasing market literacy about sambal roa products is an essential initial step through social media and digital promotion. This can be achieved through the use of social media, promotional videos, and providing free samples in local food stores. Second, business actors are advised to innovate products by developing flavor variants and spiciness levels. To meet modern consumer needs and enhance product appeal, it is vital to use hygienic and practical packaging to attract new customers. Third, leveraging social media platforms and e-commerce can expand market reach, especially for young customers who are familiar with technology. Lastly, collaboration with UMKM is also necessary to introduce sambal roa as an innovative culinary product in the UMKM market and make it part of a new local culinary identity.

This study has several limitations that should be considered for future research development. First, the data used in this study were only obtained from the Sidoarjo area. Therefore, the results may not be generalizable to other regions with different culinary preferences. Second, a descriptive qualitative purposive sampling method was used, which methodologically limits the generalization of statistical results. Third, the short research period allows for the observation of market changes that may not be fully captured, especially long-term changes in consumer preferences. Lastly, as this research heavily relies on consumer perceptions and preferences, future studies require quantitative data to measure market potential more accurately and comprehensively.

Future research can take several strategic steps to broaden and deepen knowledge about the marketing of innovative culinary products like sambal roa. Quantitative studies with larger samples and coverage beyond Sidoarjo will provide a more accurate picture of customer preferences in different areas. This is important as culinary preferences may vary greatly between regions. Furthermore, determining the most effective digital marketing strategies for innovative culinary products like sambal roa, as well as studying additional aspects such as distribution, pricing, and cooperation with local culinary products, can help improve product quality. Lastly, conducting long-term research to observe how consumer preferences for sambal roa evolve over time will provide insights into local culinary consumption trends.

## **Acknowledgements**

The authors would like to express gratitude to God Almighty for His blessings and grace, enabling this research on digital marketing strategies for innovative culinary products such as sambal roa to be completed successfully. We also extend our deepest thanks to the supervising lecturers for their guidance, direction, and motivation throughout the research process.

Special thanks are also due to all respondents and culinary business actors in Sidoarjo who generously shared their time, information, and experiences, which greatly supported the smooth execution and depth of analysis in this research.

Finally, the authors appreciate the support from family and colleagues who provided encouragement and moral assistance during the research process. It is also conveyed that this article is part of a final assignment submitted to fulfill graduation requirements at Universitas PGRI Delta, specifically in the English Education Study Program. We hope the results of this research contribute positively to the development of local culinary product marketing strategies and serve as a reference for future research.

## **BIBLIOGRAPHY**

- Ahmad, S. N., & Laroche, M. (2020). The role of emotions in customer decision-making. *Journal of Business Research*, 118, 120–135.
- Armstrong, G., Kotler, P., & Opresnik, M. O. (2022). *Marketing: An introduction* (14th ed.). Pearson.
- Dotulong, V., Patty, C. N., & Suwetja, I. K. (2018). Mutu Ikan Roa (*Hemirhamphus Sp*) Asap Yang Dijual Di Pasar Bersehati Kota Manado Sulawesi Utara. *Media Teknologi Hasil Perikanan*, 6(3), 88. <https://doi.org/10.35800/mthp.6.3.2018.21386>
- Engelen, A., Umela, S., Arisanti, D., Hasan, A. A., Azis, R., Akolo, I. R., & Angelia, I. O. (2019). Pemanfaatan Ikan Roa Dalam Pembuatan Abon Dengan Berbagai Varian Rasa Di Smkn 1 Batudaa Kabupaten Gorontalo. *Jurnal Abdimas Gorontalo (JAG)*, 2(1), 56–60. <https://doi.org/10.30869/jag.v2i1.350>
- Harjan, I. (2018). Penentuan Umur Simpan Ikan Roa Asap (Ikan Julung-Julung Asap) (*Hemirhamphus Sp*) Menggunakan Metode ASLT (Accelerated Shelf Life

- Testing) Dengan Pendekatan Arrhenius. *Techno: Jurnal Penelitian*, 7(01), 105. <https://doi.org/10.33387/tk.v7i01.612>
- Haryanto, M., & Rauf, R. A. (2017). Strategi Pengembangan Usaha Sambal Ikan Roa Pada Industri “Citarasaku” Kelurahan Tinggede Kecamatan Marawola Kabupaten Sigi. E-J. *Agrotekbis*, 5(3), 369–376.
- Hidayati, N., Septiana, A. Y., & Salsabilla, I. A. (2024). Digital Marketing sebagai Strategi Peningkatan Pemasaran Produk UMKM Desa Cerme Kabupaten Kediri. 2(3), 450–457.
- Irwansyah, D., Nurhafni, Saputra, I., & Munandar, R. (2022). Pelatihan Manajemen Industri Usaha Pengolahan Produksi Abon Ikan Tuna Di Desa Lapang Barat Kabupaten Bireuen. 5(1), 195–222. <https://doi.org/10.1201/9781032622408-13>
- Kotler, P., Kartajaya, H., & Setiawan, I. (2021). *Marketing 5.0: Technology for humanity*. Wiley.
- Kumar, V., & Mirchandani, R. (2019). Increasing the ROI of social media marketing. *MIT Sloan Management Review*, 60(2), 55–61.
- Makatita, J., & Touwely, G. H. (2022). Pkm Mandiri Membangkitkan Semangat Wirausaha Pemuda Gpm Lewat Pelatihan Pembuatan Sambal Roa Di Amgpm Dalies Jemaat Ursana Klasis Kairatu. *MAREN: Jurnal Pengabdian Dan Pemberdayaan Masyarakat*, 3(2), 14–21. <https://doi.org/10.69765/mjppm.v3i2.886>
- Pontoh, S. H. M., Bempah, I., & Saleh, Y. (2023). Strategi Pemasaran Produk Sambal Sagela Untuk Meningkatkan Volume Penjualan Pada IKM Bilal Mekar Snack (IKM-BMS) Di Kelurahan Bulotada’a Kota Gorontalo. *AGRINESIA: Jurnal Ilmiah Agribisnis*, 7(2), 101–109. <https://doi.org/10.37046/agr.v7i2.17293>
- Pontoh, S. H. M., Bempah, I., & Saleh, Y. (2023). Strategi Pemasaran Produk Sambal Sagela Untuk Meningkatkan Volume Penjualan Pada IKM Bilal Mekar Snack (IKM-BMS) Di Kelurahan Bulotada’a Kota Gorontalo. *AGRINESIA: Jurnal Ilmiah Agribisnis*, 7(2), 101–109. <https://doi.org/10.37046/agr.v7i2.17293>
- Riyanto, B., Syafitri, U. D., Trilaksani, W., & Ulya, I. (2023). Pengembangan Produk Sambal Roa Inovatif Melalui Formulasi Undur-Undur Laut. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 26(2), 216–228. <https://doi.org/10.17844/jphpi.v26i2.44396>
- Statista. (2023). *Global online food delivery market size 2025*. Statista Research Department.
- Usman, N., Halid, A., & Bempah, I. (2021). Strategi Pengembangan Usaha Sambal Roa di UKM Flamboyan Kota Gorontalo. *Agrinesia*, 5(2), 142–147. <https://ejournal.ung.ac.id/index.php/AGR/article/view/11916>
- Utami, S. C., Effendy, & Nurmedika. (2024). Strategi pengembangan usaha sambal roa pada industri Flamboyan di Kelurahan Panau Kecamatan Tawaeli Kota Palu. *Jurnal Manajemen dan Kewirausahaan*, 12(5), 1266–1275.