

*Research article*

# A Model for Culinary Business Development Using Digitalization and Halal Food to Enhance Local Product Competitiveness in Coastal Villages

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**Abstract.** This study aims to determine and analyze the potential and challenges of culinary businesses, the implementation of digitalization and halal certification, and the development of an effective and sustainable model for the "Resto Apung" culinary business to support food economic independence in coastal villages. The research was conducted at "Resto Apung" using a qualitative descriptive method with data collection techniques such as interviews, observations, and focus group discussions. The findings show that the "Resto Apung" business holds significant potential as a culinary destination with a strong attraction due to its unique location and menu offerings based on local marine products. However, several challenges hinder its development, including low digital literacy among business managers, lack of structured and professional management systems, and the absence of halal certification which is crucial in targeting broader Muslim consumer segments. Currently, digitalization has only been applied in the marketing aspect, primarily through social media, while other aspects such as financial management, customer service, and operational processes are still managed conventionally. Nevertheless, the managers have shown awareness and initiatives to improve, especially in recognizing halal certification as a strategic competitive advantage. The proposed development model integrates digitalization into all aspects of business management, enhances human resource capacity through technical and managerial training, and includes efforts to obtain halal certification. This holistic approach is expected to increase the competitiveness of the culinary business, optimize local potential, and ultimately contribute to the achievement of food economic independence in coastal areas.

**Keywords:** Certification, Digitalization, Economy, Halal, Village

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## 1. INTRODUCTION

The economic potential of the coastal areas of East Java, especially Sidoarjo, is very large, especially through the development of the culinary sector based on seafood and aquaculture. One innovative form of coastal village economic development is the culinary business "Resto Apung" which is not only an icon of local tourism, but also has the potential to increase the added value of fishery products. However, the competitiveness of local culinary products in coastal villages still faces various challenges and obstacles, such as limited market access, minimal digitalization, and minimal halal product quality standards.

Business digitalization and halal certification are two strategic approaches that are currently the focus of MSME development, including in the culinary sector. Digitalization includes the use of information technology in promotion, ordering, and efficient operational management. Meanwhile, halal certification not only fulfills religious aspects, but also becomes a guarantee of quality and hygiene that is increasingly receiving attention in the national and international markets.

The culinary business "Resto Apung" has implemented business digitalization but is still not optimal. Currently, several countries have implemented halal food so that food and beverage products in their countries have implemented halal food. Likewise, Indonesia is currently actively campaigning for food and beverage business actors to have halal certificates to ensure that their products are halal, hygienic, and safe to consume. The "Resto Apung" product is currently being prepared to obtain halal permits, with its halalness it will be able to increase the competitiveness of the product.

The results of the study by (Susanto et al., 2021a) show that the digitalization of MSMEs significantly increases market reach and operational efficiency (significant,  $p < 0.05$ ). Meanwhile, the halal food business or industry acts as a center of excellence for product development, business coaching and mentoring as well as marketing, providing public space for promotion through events, festivals and digital marketing towards Go-digital MSMEs, (Hariani, 2024) marketing communication training increases women's capacity in managing businesses, increasing self-confidence, and expanding markets through digital technology. However, MSMEs in this region face challenges such as limited capital, market access, and technical skills, (Habib & Sutopo, 2024).. website-based marketing digitalization is very effective in increasing the accessibility and competitiveness of Savira Frozen Food. The next step is to optimize digital marketing strategies, including expanding promotions and utilizing social media, so that they can be further improved in order to expand market reach more evenly, (Astuti et al., 2025). By understanding consumer preferences and implementing appropriate marketing strategies, business actors in the halal food sector can optimize growth opportunities and increase their competitiveness in the global market, (Putri et al., 2023).

Several previous studies have shown that the success of developing culinary businesses in coastal villages does not only depend on one factor, but requires an integrated approach between digitalization, strengthening halal standards, and business model innovation such as Resto Apung. The Resto Apung model as a form of tourist attraction and culinary center can also be a strategic solution that combines local values, technology, and modern market needs. Therefore, this study aims to design a Resto Apung culinary business development model based on digitalization and halal food as an effort to increase the competitiveness of local products and encourage food economic independence in coastal villages.

The formulation of the problem in this study: 1. What are the potentials and challenges of Resto Apung culinary businesses in coastal villages in increasing the competitiveness of local products? 2. How can the application of digitalization and halal certification support the development of Resto Apung culinary businesses in coastal villages? 3. What is the effective and sustainable model for developing Resto Apung culinary businesses in order to realize the independence of the coastal village food economy? The objectives of the study are to determine and analyze the potentials and challenges of Resto Apung culinary businesses in coastal villages in increasing the competitiveness of local products, and to determine and analyze how the application of digitalization and halal certification can support the development of Resto Apung culinary businesses in coastal villages. In addition, it is also to determine and analyze how the effective and sustainable model for developing Resto Apung culinary businesses is in order to realize the independence of the coastal village food economy.

## 2. LITERATURE REVIEW

### **Development of Micro, Small and Medium Enterprises and halal certification.**

MSMEs are an important part of regional economic development. According to (Tambunan, 2018), the development of MSMEs requires intervention from aspects of market access, technology, and strengthening of human resource capacity in order to grow sustainably. Halal certification has positive implications in building a halal business climate in Indonesia.

For consumers, halal certification provides protection and assurance, (Warto & Samsuri, 2020).

### **Business Digitalization**

Digitalization helps business actors in improving operational efficiency, expanding market reach, and improving customer experience. According to (Westerman et al., 2012, 2014), digital transformation encourages MSMEs to be more adaptive through the use of social media, e-commerce platforms, and management information systems. They classify digitalization into three main dimensions: customer experience transformation, operational process transformation, business model transformation.

(A. Bharadwaj et al., 2013; A. S. Bharadwaj, 2000) emphasized that digital transformation is not enough to just adopt technology, but also requires adaptive strategies, changes in organizational culture, and digital learning capacity by business actors. Without human resource readiness, technology will not be optimally effective. Digital transformation is the use of digital technology to fundamentally increase the productivity and value of the company (Firmansyah & Saepuloh, 2022). Digitalization can be seen as an increase in the generation, analysis, and use of data, on the one hand also to increase the internal efficiency of the company, and on the other hand to grow the company by adding value to customers through changes from analog to digital formats, (Radiansyah, 2022). Digital media that are commonly accessed in implementing digital marketing strategies are websites, blogs and also social media (Facebook, Instagram, Whatsapp, Line, etc.), SEO, SEM, Email Marketing, Content Marketing, branding and App Development, (Wijoyo & Widiyanti, 2020).

### **Competitive Advantage Theory**

One of the problems that makes the competitiveness of MSMEs still low is the limited ability of business actors to carry out marketing, (Susanto et al., 2021b). Meanwhile, (Porter & Advantage, 1985) stated that competitive advantage can be built through product differentiation (such as halal food), service innovation, and strengthening local added value that is unique and difficult for competitors to imitate. Michael E. Porter in his work *Competitive Advantage: Creating and Sustaining Superior Performance*, stated that an organization or business unit can gain competitive advantage if it is able to create and deliver greater value to customers compared to its competitors. Porter identified two main strategies for building competitive advantage: Differentiation, Cost Leadership, Focus Strategy (Strategy Focusing on Certain Segments). Porter also explained that competitive advantage can be obtained through a strategy of focusing on a narrower but clear market segment. Halal floating restaurants, for example, can focus on serving: Domestic and foreign Muslim tourists (halal tourism), Local consumers who prefer fresh and halal-certified seafood, Digital native consumers who seek unique culinary experiences through social media. (Porter & Advantage, 1985) also emphasized the importance of the value chain, namely all activities that create value from upstream to downstream starting from procurement of raw materials, production, marketing, to after-sales service. In the context of coastal floating restaurants, optimization of this value chain can be done through: Collaboration with local fishermen, digital branding and modern packaging, immersive consumer experiences (culinary and tourism). By combining product differentiation, use of digital technology, and appropriate market segmentation, coastal MSMEs can form a sustainable competitive advantage that is rooted in local wisdom but has global appeal.

### **Local Food Security and Independence Theory**

Food independence is a condition in which a community is able to meet its food needs sovereignly. According to (Suryana & Dasuki, 2013) a local potential-based approach such as the development of processed seafood products in coastal villages is a strategic path towards food security and independence. Food security and independence are two very

important concepts in community-based economic development, especially in rural and coastal areas. According to (Suryana & Dasuki, 2013) food security is a condition in which households have sufficient food, accessibility to adequate food, and utilization of food that is in accordance with local nutrition and culture. Meanwhile, food independence emphasizes the ability of a region or community to meet its own food needs sustainably, without excessive dependence on external supplies. Food independence is rooted in strengthening local potential, sovereignty in determining food sources and types, and local wisdom in production and distribution. Smoked fish processing is classified as a home industry scale business. Therefore, limited resources require regulations that can optimize their use and solve problems faced in processing efforts (Hiarley & Romeon, 2015) Food is everything that comes from biological sources of agricultural products, plantations, forestry, fisheries, livestock, waters, and water, both processed and unprocessed, which are intended as food or drinks for human consumption, including food additives, food raw materials, and other materials used in the process of preparing, processing, and/or making food or drinks, (Bill on Food which has been ratified through the Plenary Session of the House of Representatives of the Republic of Indonesia on October 18, 2012).

Food independence is closely related to household economic independence, especially for fishermen, women, and local MSMEs. Consumption of local food also strengthens cultural identity and enriches Indonesia's culinary heritage. Local menus based on sea fish, coastal spices, and traditional processing techniques are part of the cultural heritage that strengthens the social and ecological resilience of coastal communities.

### 3. METODOLOGY

This study uses a qualitative descriptive approach, which aims to describe in depth the phenomena that occur in the field, especially related to the development model of “Resto Apung” culinary businesses based on digitalization and halal food in order to increase the competitiveness of local products in coastal areas. The qualitative approach was chosen because it is considered capable of capturing social reality holistically, deeply, and contextually, and allows researchers to understand the subjective meanings held by business actors and stakeholders at the research location.

The research was conducted at the Floating Restaurant in Penatarsewu Village, Tanggulangin District, Sidoarjo Regency, which is one of the coastal areas with quite large local culinary potential based on seafood. The selection of the research location was carried out purposively by considering the characteristics of the area and the relevance of its context to the focus of the research, namely the development of a local economy based on halal culinary and digitalization.

The informant selection technique used purposive sampling, namely the determination of research subjects or informants deliberately based on certain criteria that are relevant to the focus of the research. The informants in this study consisted of floating restaurant business actors, business managers, consumers, and other parties who had knowledge and direct experience related to the development of culinary businesses in the area. Data collection techniques are carried out through several methods, namely: in-depth interviews, focus group discussions (FGD), participant observation, documentation. Data analysis techniques use interactive model analysis as developed by (Miles & Huberman, 1984) which consists of 4 stages, namely: data collection, data reduction, data presentation, and drawing conclusions.

### 4. RESULTS

From the interview results, it is known that the digitalization of business management in “Resto Apung” has not been fully managed using digital technology. The part that has used digitalization is the marketing division, including promotions on social media, TikTok, and

Instagram to target consumers. From the results of a limited focus group discussion, it is known that the management of “Resto Apung” has used digitalization in the marketing section. To increase the competitiveness of floating restaurants, they must increase digitalization in managing their businesses, involve employees in training related to financial reports, marketing carried out digitally, considering that “Resto Apung” have the potential to be developed. Management are also preparing to apply for halal certification, various preparations have been made including cleanliness of the cooking area away from pets, closed food storage, and cleanliness in serving to consumers. Making soups that must be followed by all members of the organization.

## 5. DISCUSSIONS

This study aims to develop a culinary business model "Resto Apung" based on digitalization and halal food to increase the competitiveness of local products and encourage food economic independence in Penatarsewu Village, east coast of Sidoarjo. The results of the study indicate that the application of digitalization in the culinary business "Resto Apung" is still limited, especially in the marketing aspect through social media such as TikTok and Instagram. Meanwhile, the managerial aspect, financial management, and operational supervision are still conventional.

### Potential and Challenges of Floating Restaurant Culinary Business

The main potential of the Resto Apung culinary business lies in its unique location, which is located on the water in a coastal area that provides a different culinary experience and high tourist attraction. This is in accordance with the findings of (Siregar et al., 2021) which states that local and thematic-based culinary tourism can be a tourist attraction that strengthens the regional economy.

However, the challenges faced include the low capacity of human resources in managing technology-based businesses, the absence of an integrated digitalization system, and the incomplete fulfillment of halal certification standards. This finding is in line with the research of (A. Nugroho & Rahmawati, 2020) which states that limited digital and managerial literacy are the main obstacles in the digital transformation of MSMEs, especially in coastal and rural areas.

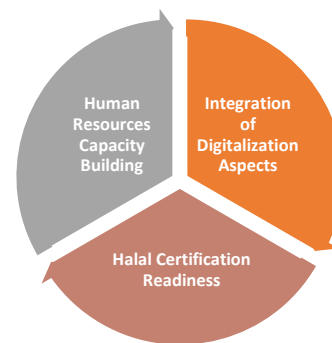
### The Role of Digitalization and Halal Certification

The application of digitalization, in the digitalization business has had a positive impact. In digital marketing, it can reach consumers more widely, especially the younger generation of social media users. However, in order to compete comprehensively, digitalization must be expanded to other aspects such as online ordering systems, digital financial records, and operational management. A study conducted by (A. Nugroho & Rahmawati, 2020) in their study entitled Digitalization and Sustainability of Halal Culinary MSMEs during the Covid-19 Pandemic, shows that digitalization of MSMEs plays a role in increasing the number of sales and business turnover and helping MSMEs survive in the midst of the Covid-19 pandemic.

Regarding halal food, the Resto Apung restaurant has begun to show awareness of the importance of halal certification as part of competitiveness. The preparations made such as cleanliness of the kitchen area, food processing and serving, and the creation of internal SOPs show seriousness in meeting the requirements to obtain a halal certificate.

### Sustainable Floating Restaurant Culinary Business Development Model

Based on the results of the focus group discussion, an effective development model includes the integration of comprehensive digitalization aspects, increasing HR capacity through training, and readiness for halal certification.



**Figure 1.** Sustainable "Resto Apung" Culinary Business Development Model

This model is in line with the Quadruple Helix approach (government–industry–academia–community) proposed by (Etzkowitz & Leydesdorff, 2000) as a strategy for developing local community-based innovation. The village government and related agencies are expected to provide assistance, training, and access to capital so that this culinary business becomes a village flagship. Furthermore, (Yuanitasari et al., 2025) research entitled Digitalization of Halal Certification for MSMEs: Between Hope and Reality, the proposed solutions include increasing digital literacy, simplifying administration, and strengthening collaboration between stakeholders. Thus, the development model offered in this study is not only relevant to Penatarsewu Village, but can also be replicated in other coastal villages in Indonesia.

## 6. CONCLUSIONS

Potential and Challenges "Resto Apung" Culinary Business in Penatarsewu Village have great potential as a unique and highly attractive thematic culinary destination. However, the challenges faced include low digital literacy of managers, limited professional business management, and less than optimal fulfillment of cleanliness and halal product standards.

Implementation of Digitalization and Halal Certification, Digitalization in "Resto Apung" Culinary Business has only been applied to a limited extent to marketing aspects through social media. Meanwhile, aspects of financial management, customer service, and operations are still managed conventionally. Halal certification is not yet available, but managers have made various preparations that demonstrate awareness of the importance of halalness as a competitive advantage.

The ideal development model for "Resto Apung" Culinary Business is the integration of full digitalization in business management, increasing HR capacity through technical and managerial training, and fulfilling halal standards as a whole. This concept supports the achievement of village food economic independence by utilizing local potential and encouraging competitiveness based on added value.

## RECOMMENDATION

Human Resource Capacity Building through Digital Training and Halal Certification. Village governments and related agencies need to initiate ongoing training programs for "Resto Apung" business actors, especially in the fields of digital marketing, application-based financial management, and halal certification application procedures. This effort will strengthen managerial competence and build awareness of the importance of product quality and halal standards. Strengthening Integrated Digitalization in Business Management. Digitalization needs to be developed more broadly, not only limited to promotions, but also including ordering systems, transaction recording, inventory management, and digital-based customer feedback. The implementation of an integrated digital system will increase operational efficiency and provide a better experience for consumers. For further researchers, they can expand the objects and locations of research, or they can use a quantitative or mixed methods approach.

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**CONFLICT OF INTEREST**

The authors declare no conflict of interest.

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