

Halal Value Chain of Processed Fish Food: Case Study of Pempek and Tekwan

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Abstract

Purpose – This study aims to simulate a Halal Value Chain for processed fish food products achieving halal certification standards. The products we chose were Pempek and Tekwan which are the most processed fish foods in Jambi City.

Methodology - This study is qualitative research. Halal Value Chain of processed fish food products is simulated by using data from MSMEs owning Halal Certification. We conduct the research with three stages. The first stage was determining the MSMEs that would be researched, where the business products had received a BPJPH halal certificate, the second stage was observing and identifying production houses and the third stage was processing the data and information that had been obtained and simulating a halal value chain.

Findings -. We have succeeded in simulating a Halal Value Chain for processed fish food products, especially for Pempek and Tekwan products by MSMEs owning Halal Certification. This simulation can be used for the same business, we also found that the halal value chain in processed fish food should always be maintained by halal management. MSMEs needs to create operational standards in monitoring and evaluating the halal value chain.

Keywords: Halal Value Chain, Halal Certification, Processed Fish Food, Pempek and Tekwan

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1. INTRODUCTION

Indonesia is the country with the largest number of Muslims in the world (Juliana et al., 2022b). In 2022 the Muslim population will reach 86.7% of the total population in Indonesia (Putri, 2023). The Muslim population in Indonesia will even reach 240.62 million people in 2023. This number is equivalent to 86.7% of the national population which totals 277.53 million people. (RISSC, 2023). From this background, Indonesia, as the largest Muslim population in the world, must be able to guarantee the halalness of products circulating or produced in Indonesia, because halal products are a right and an obligation for every Muslim (Mahri et al., 2024; Juliana et al., 2024; Rohmana et al., 2022).

Law Number 33 of 2014 concerning Halal Product Guarantees confirms that food products, medicines, cosmetics and other products must be halal certified, meaning that the halal obligation does not only apply to large companies but also to MSME products. This is supported by regulations that were previously issued in Law Number 8 of 1999 concerning Consumer Protection in Article 8 paragraph 1 Letter h that business actors are prohibited from producing and/or trading goods and/or services that do not follow the provisions of halal production, as stated in the halal statement on the label.

Providing a halal product guarantee will guarantee a sense of comfort, security, safety and certainty of the availability of halal products for the public or consumers in consuming and using the product (Muflih & Juliana, 2021). Meanwhile, for business actors, the halal guarantee aims to increase added value for business actors to produce and sell halal products (Herawan et al., 2022; Juliana et al., 2022a). This is based on research of (Fuadi et al., 2021) that business actors who already have a halal certificate are able to increase income, increase competitiveness, and at the same time have implemented halal obligation regulations.

The culinary industry is the fourth most influential industry in Indonesia (Warto & Samsuri, 2020). There are various kinds of culinary industries that are developing, some of the popular types of food are traditional food or food from various regions in Indonesia. One example is the culinary delights of Pempek and Tekwan which are typical foods from the South Sumatra region and are a form of processed fish product that is much popular. The city of Jambi is one of the areas where many people love Pempek and Tekwan culinary delights. It is not surprising that this area, which neighbors South Sumatra, also has many stalls, restaurants and small businesses that serve pempek as the main dish.

The use of processed fish food products in innovative food production is a promising way to meet the demands of a growing population (Silovs, 2018). This is increasingly supported by the development of fish protein-based snacks. However, the quality of fish products is greatly influenced by processing and preparation techniques, so innovative approaches are needed to ensure nutritional value is guaranteed (Sampels, 2015). Additionally, added value is a key focus in the fish processing industry, with a range of value-added and diversified fish products identified for both export and domestic markets (Aditi & Varsha, 2020). One added value that can be done is maintaining the halal value chain in processed fish food. The halal value chain as we have stated will provide comfort and a sense of security for consumers when consuming processed fish food. Moreover, halal is legally mandatory in Indonesia.

In this study *Halal Value Chain* for Processed Fish Food is simulating for MSME willing to have Halal certification, especially the culinary delights of Pempek and Tekwan. Therefore MSME will have added value on their product and fulfill halal compliance as a mandatory in Indonesia based on Law Number 33 of 2014.

The halal value chain is a complex system that involves various economic activities and actors, as highlighted by (Amir & Subroto, 2019). This system is particularly important in the food and beverage industry, where it serves as a seal of approval for quality (Alfzari & Omain, 2022). The application of Islamic values in the halal supply chain, as explored by (Omar et al., 2019) is crucial for its resilience and sustainability. (Kholilah et al., 2022) further emphasizes the significance of technical requirements and the need for sharia-compliant production, distribution, and consumption activities in the halal value chain. The halal value chain of Processed Fish Food in case of Pempek and Tekwan to support the development of a *halal value chain* issues and the the subsequent development of Halal Certification potential to support economic independence of MSME halal compliance fulfilling are both discussed in this research. As a result, Simulating Halal Value Chain of Processed Fish Food will . As a result, this simulating of the halal value chain for processed fish food will be an illustration for other MSMEs in creating a halal value chain for the same product, especially for processed fish products in the halal certification process which is an obligation.

2. LITERATURE REVIEW

2.1 Processed Fish Food in Islam

Fish are members of the vertebrates or animals that have a spinal structure. Fish are a type of organism whose entire or part of their life cycle is in the aquatic environment (UU RI No. 31, 2004). Fish are usually kept as ornamental fish or consumed as an everyday side dish. Fish is rich in benefits because it is a source of protein for the body. Apart from that, fish also contains various vitamins and minerals which are very beneficial for health.

In Islam, fish is a halal food for consumption, even the dead fish allowed to be eaten according to Islamic law. Two kinds of dead meat and two kinds of blood have been permitted to us. The two kinds of dead meat are fish and locusts, and the two kinds of blood are the liver and spleen (Ibn Majah, 3314).

Islam regulates all human life. Islam also guides humankind to treat animals with the utmost kindness and compassion. According to Islam, human should not disturb the perfect balance universe created by Allah. Human are not permitted to kill animals just for sports or amusements. Islam teaches that on the Day of Judgment all human will be questioned how animals were used in their daily life. Islam also prescribes a set of rules to reduce the pain and distress of animals during killing/ slaughtering of animal including fish. Many of them are killed by unethical ways. Human show cruelty to fish during exploiting, culturing, killing, experimentation and even in the name of sports or amusement. Presently, overexploitation of marine fishes is a serious problem worldwide. Overall, 53% of the world's commercial fish stocks are currently reported as fully exploited and 32% are overexploited.(Rahman, 2016)

Besides that, we should underscore the importance of halal certification, food safety, and sustainable practices in the fish processing industry. The halal fish processing industry faces various challenges, including the need for improved product quality and halal certification (Sukoso et al., 2022). These challenges are particularly pronounced in small and medium-sized enterprises, where limited resources and non-Muslim ownership can hinder the application of halal practices (Hendri et al., 2022). However, the industry also presents significant opportunities for livelihood and income generation, especially with the introduction of new fish and shellfish species and advancements in processing technologies (Singh & Surasani, 2020).

2.2 Halal certified MSMEs of Processed Fish Food

Business use of the Quranic and fiqhi word halal is now conspicuous because of the penetration of halal product ideas not only into the food products but also into the pharmaceutical, cosmetic, leisure and entertainment industries. Halal regulates various standards in business management. These standards have significant implications for equitable growth in a society and a blissful eternal life. The topic of product-centric halal business has not been fully explored and understood by its stakeholders (Shahabuddin et al., 2022).

Hafish Food is one of the MSMEs in Jambi City which produces processed fish food ingredients in Jambi City. With certificate no. 29030007371214, this MSME received a halal certificate for processed Fish Meatballs, Fish Nuggets, Fish Sausages & Fish Skin Crackers. This business also has main products, namely Pempek and Tekwan. This MSME is located at Jl. Arief Rahman Hakim No.45 Rt.16 Kel. Simpang IV Sipin, Kec. Telanaipura Jambi. Hafish Food was founded in 2020 and has carried out halal certification in 2021. This MSME provides various kinds of processed fish food in the form of dishes or in freezer form.

Even though it is in the MSME class, the marketing of Pempek Hafish is not only limited to the city of Jambi, but has spread to foreign countries such as Malaysia and Singapore. Meanwhile, almost all of the regions in Indonesia have been distributed. Pempek Hafish distribution uses a delivery service that works directly with the business owner. In the production process, Pempek Hafis works with as many as 10 employees every day. Because it is halal certified, of course the processing, packaging and marketing processes are of good standard. Clarifying the status of the products produced and guaranteeing that all materials used in the production process are halal are the two main objectives of the very important principle of halal certification. To guarantee that the products produced are free from haram or unclean materials originating from workers, production equipment, or surrounding environment, and so that the halal production process can continue without interruption, all materials used in the process are halal.

The process of making halal products can be carried out continuously. Of course, after obtaining halal certification, companies and small traders must implement a halal guarantee mechanism to ensure that the goods produced remain halal.

2.3 Pempek and Tekwan

Pempek (or also called empek-empek) is a fish-flavored dish served with a typical Palembang black sauce called cuko. A food that has existed since the time of the Srivijaya Kingdom around the 8th century AD, this is proven by the discovery of the Talang Tuo Inscription which states that the sago plant has existed since the 7th century AD. several variations, such as pempek submarine, lenjer, lenggang, and so on.(Alfunafisa, 2023)

Tekwan is made from the same ingredients as pempek but with more fish in its composition, it tastes very delicious because the sauce is made from shrimp, sweet potatoes and spices. Tekwan is made without tofu and cooked by boiling it in a more spiced sauce.(Giwang, 2024)

2.4 Halal Value Chain

The number of publications on the development and trend map of Halal Value Chain (HVC) research experienced a significant increase (Antonio et al., 2020). The halal value chain, as explored by (Amir & Subroto, 2019) is a complex system of economic activities that is influenced by various factors such as standards, certification, and traceability. The idea of the value chain is

based on the process view of organisations, the idea of seeing a manufacturing (or service) organisation as a system, made up of subsystems each with inputs, transformation processes and outputs. The halal chain ensures halal guarantee from the production process, distribution, to consumption (Kholilah et al., 2022). Storage, distribution, delivery or transportation is part of the halal logistics mechanism (Hashom et al., 2020) which is also an important element in the halal value chain. The findings of this research were the same as (Karia & Asaari, 2016) delved into the practical application of halal value creation in logistics, identifying innovative practices and resources. These studies collectively contribute to our understanding of the halal value chain, its development, and its potential impact on firm performance. The results draw the novel practices of halal value creation in logistics, that have not been revealed and further identifies five emerging resources of resource-based halal logistics. These create innovation capability (ability to launch successful halal goods/services) in logistics services.

This is further supported by (Yusuf & Yajid, 2017) that Halal Value Chain should cover all aspects of the management system, including selection of raw materials/ingredients, built-in production processes, storage, distribution, transportation, and delivery to the consumer. The concept of a halal chain is a critical aspect of the halal food supply chain, which involves managing halal food and beverage items from production to consumption (Alfzari & Omain, 2022). Product traceability is also an important aspect in the halal value chain concept. Halal traceability can be used as a medium to track the halal status of a food product from upstream to downstream (Wahyuni & Arfidhila, 2019). Halal value chain is an aspect on halal certification that it is important as a benchmark for halal compliance.

2.5 Halal Product Guarantee System in Indonesia

Halal Product Guarantee System or Manual SJPH is a document that serves as a guide for implementing SJPH in companies. The SJPH manual applies to all company facilities related to the halal product process (PPH), including outlets, maklon and rental warehouses. This manual book was created by BPJPH as a guide and completeness of documents that MSMEs must fulfill when applying for halal certification, especially the self-declare program. Even though currently, the SJPH manual is no longer used, and has switched to online filling on the Halal website <https://ptsp.halal.go.id/>, the content and essence of filling in the halal guarantee from MSMEs is still the same as the SJPH manual that was previously published by BPJPH.

3. METHODOLOGY

The object of this research is processed fish products in the form of Pempek and Tekwan starting from providing production, product processing and equipment used in the production process. The data sources involved in this study are primary and secondary data. The primary data source is the information obtained directly from the informants through interviews, documentations and observation. The secondary data are collected through a literature review from books, journals, and other supporting sources, such as notes on halal certification process, MSMEs reports, and agreements. We conduct the research with three stages. The first stage was determining the MSMEs that would be researched, where the business products had received a BPJPH halal certificate, the second stage was observing and identifying production houses and the third stage was processing the data and information that had been obtained and simulating a halal value chain. After that, data analysis was carried out and described according to data collection in the field. The

data become the basis for the author in reviewing and simulating MSMEs Halal Value Chain in processed fish food through Pempek and Tekwan products.

4. RESULTS AND DISCUSSION

4.1 Ingredients of Pempek and Tekwan

The quality of Halal products, known as Halalan Thoyyiban, is a key factor in their appeal to both Muslim and non-Muslim consumers (Rusydziana & Purwoko, 2022). Halal ingredients are those that are permissible for consumption or use according to Islamic dietary laws (Shariah). These ingredients are derived from sources that comply with Islamic principles and are free from any substances that are considered haram or impure.

The composition of the ingredients used in the Pempek and Tekwan production process includes snapper, sago flour, oil, salt, flavoring, oil and eggs. The critical point in production materials seen from the analysis results can be seen in the table below;

Table 1. List of Ingredients for Pempek and Tekwan

No.	Ingredient	Product name		Ingredient Description
		Pempek	Tekwan	
1	Ground Snapper Fish	✓	✓	Pempek Ingredient
2	Tapioca flour Cap Pak Tani Gunung	✓	✓	Pempek Ingredient
3	Sovia Cooking Oil	✓	✓	Auxiliary Ingredient of Tekwan and Pempek
4	Chicken Eggs	✓	✓	Pempek and Tekwan Ingredient
5	White Crystal Sugar Rose Brand	✓	✓	Pempek and Tekwan Ingredient
6	Refina Salt	✓	✓	Pempek and Tekwan Ingredient
7	Garlic	✓	✓	Pempek and Tekwan Ingredient
8	Red Onion	✓	✓	Pempek and Tekwan Ingredient
9	Flavoring (Ajinomoto)	✓	✓	Pempek and Tekwan Additive Ingredient
10	Brown Sugar	✓		Pempek Vinegar (Cuko) Ingredient
11	Leek	✓		Auxiliary Ingredient of Pempek
12	Vinegar Dua Belibis	✓		Pempek Vinegar (Cuko) Ingredient
13	Tamarind Cap Gunung	✓		Pempek Vinegar (Cuko) Ingredient
14	Cayenne Pepper (Rawit)	✓	✓	Pempek Vinegar (Cuko) Ingredient and Tekwan Pepper
15	Pepper Powder Ladaku	✓	✓	Tekwan Additive Ingredient
16	Cucumber		✓	Tekwan Additive Ingredient
17	Corn Vermicelli Sounku		✓	Tekwan Additive Ingredient

18	Wood Ear Mushroom		✓	Tekwan Additive Ingredient
19	Celery		✓	Tekwan Additive Ingredient
20	Dried Small Shrimp	✓		Pempek Vinegar (Cuko) Ingredient

Source: Hafish Food (2023)

The ingredients used in the production process are halal certified. The ingredients used include ground snapper fish supplied from sellers at the Handil market who are halal certified, sago flour produced by PT. Budi starch & sweetener Tbk, chicken eggs purchased from sellers at Handil Market, cooking oil produced by PT Multimas Nabati Asahan, salt produced by UNIChem Candi Indonesia, flavorings from PT. Ajinomoto Indonesia, shallots and garlic bought from sellers at Handil market.

4.2 Treatment of Equipment

Equipment also has an important role for the Halal Value Chain compliant. Keeping all production facilities and equipment clean (free from uncleanness) before and after use through washing is a mandatory that needs to be carried out. The critical point of a product's uncleanness can not only be seen from the ingredients but can also be seen from the equipment used (Aang Yusril M, 2020). Business owners must clean equipment in a place/facility that is separate from household washing, using dishwashing materials that are not derived from non-halal or unclean materials, and verify the washing results to prove the absence of uncleanness by ensuring the color, odor and taste are not something stings or is strange. The following is a table of suitability of equipment used during the Pempek and Tekwan production process ;

Table 2. Equipment Treatment

No.	Name of Equipment/Facilities	Description / Findings	Appropriate/Not Appropriate
1	Knife	Knives are always washed after the production process, so they are clean in the next production process.	Appropriate
2	Stove	Always cleaned after completion of production	Appropriate
3	Saucepan	Always cleaned after completion of production	Appropriate
4	Pan	Always cleaned after completion of production	Appropriate
5	Blender	Always cleaned after completion of production	Appropriate
6	Scales	Always cleaned after completion of production	Appropriate
7	Cutting Board	Always cleaned after completion of production	Appropriate
8	Spatula	Always cleaned after	Appropriate

		completion of production	
9	Basin	Always cleaned after completion of production	Appropriate

Source: Hafish Food (2023)

4.3 Preparation of Ingredients

The halal value chain, which encompasses the preparation of ingredients, is a complex system influenced by various factors. (Amir & Subroto, 2019) and (Alfzari & Omain, 2022) both highlight the significance of halal certification in ensuring the integrity of the supply chain. (Zainuddin et al., 2019) further emphasizes the role of certification and labeling in enhancing supply chain performance. (Noordin et al., 2014) underscores the importance of operational efficiency in the halal certification system, which is crucial for maintaining the halal standard. These studies collectively underscore the importance of a robust halal certification system and efficient supply chain management in the preparation of halal ingredients.

In the process of providing ingredients for Pempek production, ingredients that have been verified as halal. The ground fish used has been confirmed to be halal and clean. Other ingredients are also clearly halal. In the process of providing ingredients, Tekwan uses ingredients that have been verified as halal. The ground fish used has been confirmed to be halal and clean. Other ingredients are also clearly halal.

4.4 Dough Processing

The halal value chain in dough processing is a complex system that requires the implementation of a Halal Assurance System (HAS) to ensure compliance with halal standards (Perdani et al., 2018). This system involves creating value for customers and all parties involved in the supply chain, with a focus on logistics services (Okdinawati et al., 2021). Halal Food Supply Chain practices will focus on consumer trust and satisfaction (Alfzari & Omain, 2022). The creation of halal value chains in economic activities has been explored, with a theoretical approach that includes the role of certification and accreditation (Amir & Subroto, 2019).

The process of processing pempek dough is by mixing ground fish, sago flour, eggs, flavoring and salt into one dough into a large kneading tool and mixing evenly. After it is mixed evenly, the mixture is put into a large bowl to then be shaped and boiled or fried. At this stage of processing and forming the dough, there is a critical point in the process of forming the pempek dough, where sometimes there are still employees who do not use food gloves. The use of gloves is very necessary to maintain the halal value chain for making Pempek, because in this process there is direct contact between employees and the dough, of course there is a chance of contamination that might occur. Using gloves will ensure that the dough remains hygienic during the Pempek processing process.

Meanwhile, the process of processing tekwan dough is done by mixing ground snapper fish, sago flour, eggs, salt and flavoring into one dough in a mixer until smooth. In the findings of the research object that we conducted, there is no critical point in the processing of tekwan dough because the ingredients used are guaranteed to be halal and clean. The equipment used in the manufacturing process is also hygienic. After the dough making process is complete, the equipment used is always washed cleanly and there is no direct contact between employees and the dough.

4.5 Cooking Process

The halal value chain cooking process is a complex system that involves various stages, this stage starts from procurement of ingredients to delivery, and requires the collaboration of all actors in the supply chain (Perdana, 2020). In this process, it will be more effective if the ingredients used for cooking have halal certification and labeling, which can significantly improve the performance of the halal supply chain (Zainuddin et al., 2019) including in the cooking process. To ensure halal compliance during the cooking process, it is necessary to use a standard operational system that maintains the halal value chain.

The Pempek dough that has been made will then be cooked in a large pan using clean, boiling water. Some of the other dough will be fried in a skillet filled with hot oil. The cooking oil used in the frying process is labeled halal and new oil is always used for each production. At the stage of the Pempek dough cooking process, no critical points or opportunities for contamination were found.

After the Tekwan dough is ready, the dough is then shaped and boiled in boiling water, with a little cooking oil added to the water so that the dough doesn't stick together. After the mixture is cooked, drain it into a mesh container. In this process, no critical points were found in the tekwan cooking process because the ingredients used were confirmed to be halal and the tools used in the cooking process also used clean and hygienic equipment.

4.6 Packaging of Pempek and Tekwan

The concept of halal packaging, which ensures that both the contents and the packaging of a product are compliant with Islamic dietary laws, is a growing concern in the food industry (Talib & Johan, 2012). However, the certification and labeling of halal products, including their packaging, is a complex process that requires further research and standardization (Hanzaee & Ramezani, 2011). The increasing demand for halal products and the potential for halal to become a new business paradigm further underscores the importance of addressing these issues (Wilson, 2014).

Packaging of pempek products is done after the pempek is cooked and cooled. The process of cooling the boiled Pempek is done by placing it in a mesh container so that the boiled water can also be coarse. After the boiled water is dry, it is transferred to another container and arranged one by one. Next, the Pempek is fanned until it is completely cold. After it cools, the Pempek is packaged using plastic. To maintain product durability, Pempek Hafis vacuums its freezer products. Pempek Hafis Food products do not use any type of preservative. We did not find any critical points during the packaging process for Pempek products.

Tekwan is usually served with sauce along with complementary ingredients such as su'un, cucumber, fried shallots. New Tekwan will be served when an order is placed. No critical point was found in the Tekwan presentation process. Employees at Hafis Food use gloves in the serving process and use a clean place. The surroundings of the serving room are also neat and clean.

4.7 Analysis of the Processing of Pempek Vinegar and Tekwan Sauce

Pempek vinegar is produced using ingredients such as palm sugar, tamarind, garlic, chilies and salt. Palm sugar is bought from palm sugar vendors at the Handil market, Jambi, as are tamarind, garlic and chilies. When using palm sugar, it is best to come from distributors who have a Halal certificate. So that the Halal Pempek value chain remains guaranteed. Salt is purchased in supermarkets and is certified Halal.

The sauce in Tekwan products is made from a mixture of natural ingredients and spices and halal ingredients in the form of garlic and ginger which are supplied from sellers at the Handil market, flavorings from PT. Ajinomoto Indonesia, salt from UNI Chem Candi Indonesia, Pepper from PT. Indofood, and water.

4.8 Flowchart of the Halal Value Chain for Pempek and Tekwan Production

Flowchart are very necessary in understanding the production process of a product. This diagram will also illustrate the Halal Value Chain, which is an indicator of whether there are flows that still have the opportunity for contamination in the halal value chain of a product. Below we present a flowchart of the Halal value chain for processed fish food products in the form of Pempek and Tekwan in the case of the producer Hafis Food:

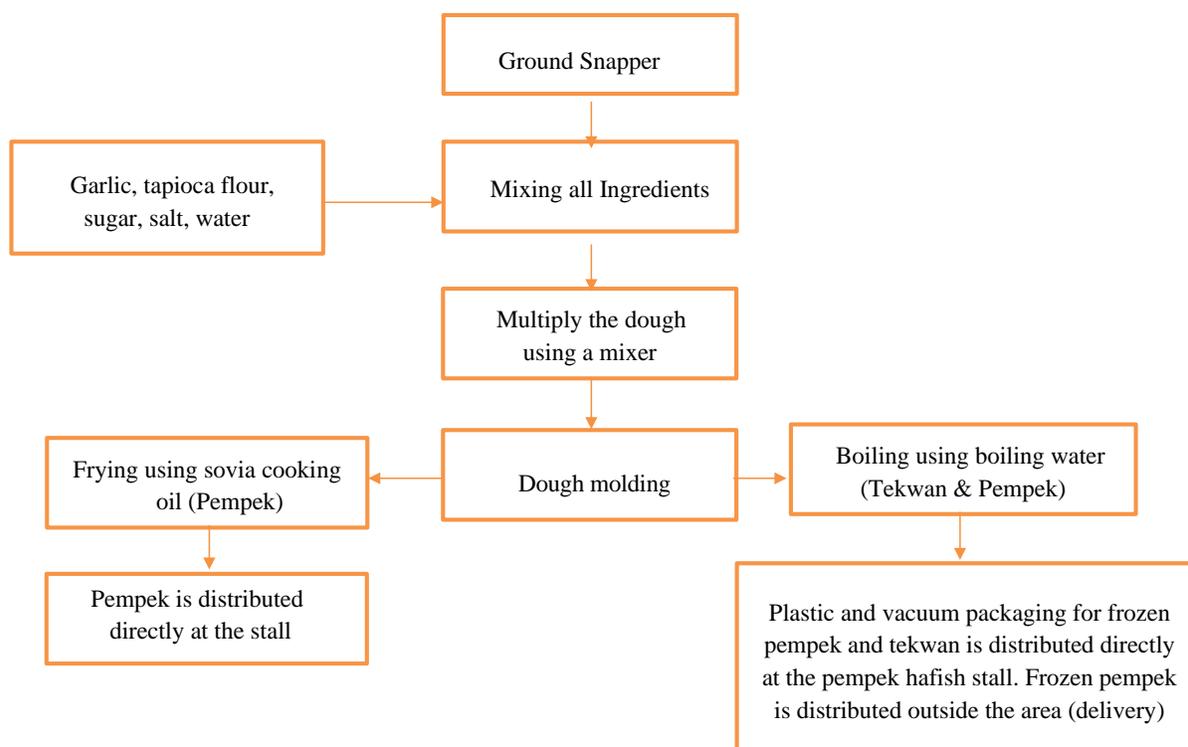


Figure 1. Flowchart of the Halal Value Chain for Pempek and Tekwan

Source: Hafish Food (2023)

Analysis of the production process, the level of cleanliness of finished goods and production machines, as well as storage, preservation, processing and packaging processes, are all important components in the food production process. The above elements are regulated in the Minister of Industry Regulation on good food production methods (CPPB) together with hazard analysis and critical control points (Hazard Analysis and Critical Control Points, HACCP) and GMP good food production methods (Antonio et al., 2021). These regulations pay attention to the process of producing food that is fit for consumption and of good quality.

4.9 Flowchart of the Halal Value Chain for Cuko Pempek

The Flowchart in making Cuko Pempek is also needed, because the halal value chain cannot be only partial in production, the halal value chain is a complete unit in a product, until the product reaches the consumer. In the Halal value chain for making Cuko Pempek, it is necessary to look at opportunities for contamination that might occur. Below we present a Flowchart of the Halal Cuko Pempek value chain in the case of the Hafis Food ;

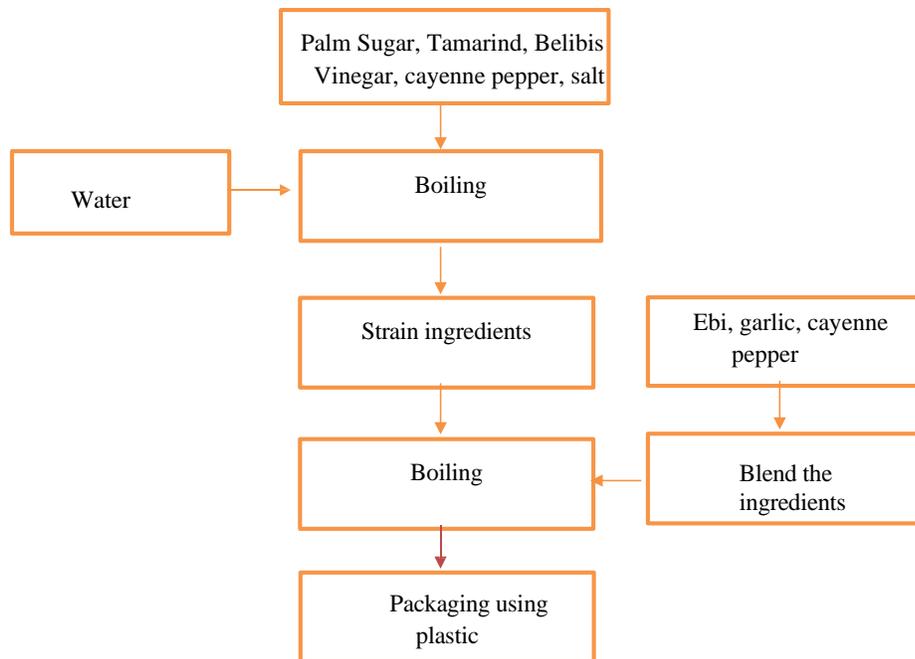


Figure 2. Flowchart of the Halal Value Chain for Cuko Pempek
Source: Hafish Food (2023)

4.10 Flowchart of the Halal Value Chain for Tekwan Sauce

The flowchart for making Tekwan sauce is quite simple. The ingredients used in Tekwan sauce are natural ingredients. Natural ingredients tend to be positive list ingredients that do not contain risks and contamination, because the halal value chain cannot be only partial in production, the

halal value chain is a complete unity in a product, until the product reaches the consumer. In the Halal value chain for making Cuko Pempek, it is necessary to look at opportunities for contamination that might occur. Below we present a flowchart of the Halal Tekwan sauce value chain in the case of the Hafis Food

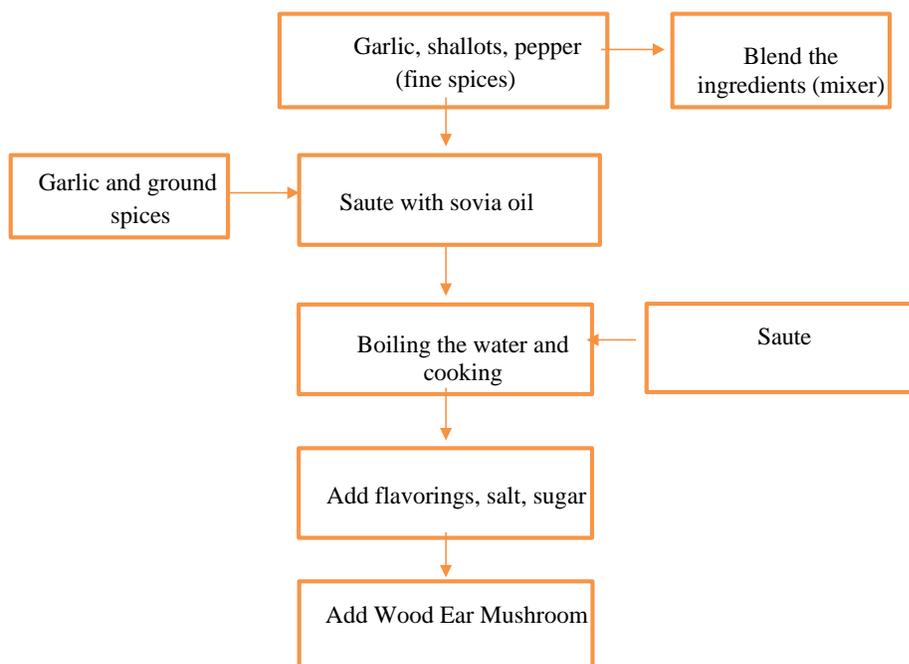


Figure 3. Flowchart of the Halal Value Chain for Tekwan Sauce
Source: Hafish Food (2023)

4.11 Evaluation Study of Processed Fish Food based on the SJPH Manual

a. Halal Commitment and Management

Halal commitment and management should be an ongoing process, with businesses continuously reviewing and improving their practices to stay aligned with evolving halal standards and consumer expectations.

Hafish Food has a high commitment to its business by having a halal certificate from the MUI, and a business license. This pempek hafish business always carries out its business activities in accordance with Islamic law, such as using production materials that are halal-labeled and registered with halal mui and bpom in their packaging. At the production site and sales site, the Pempek Hafish business always maintains cleanliness and ensures that it is free from uncleanness and contamination haram product.

b. Materials/Facilities

In producing pempek and tekwan pempek hafish has ensured that all the ingredients used in the recipe are halal certified. This includes fish, flour, and other components used in making pempek hafish products.

Production facilities must adhere to strict cleanliness and hygiene standards to prevent contamination with non-halal ingredients.

This includes the use of separate tools and equipment for halal production. The facilities used in the production of pempek hafish products are always cleaned after use. For pempek and tekwan places that are distributed directly, always keep them clean and use a cover on the pempek which is placed in the display case so that it doesn't get dirty infested with flies.

c. Halal Product Process

The production process must comply with halal standards and regulations. Halal-compliant production and processing methods must be implemented to prevent contamination with non-halal ingredients or substances. This may include segregating production lines, implementing hygiene and sanitation practices, and ensuring that equipment is properly cleaned and maintained.

This involves obtaining halal certification for the pempek production process, which ensures that the entire process, from ingredient procurement to packaging, complies with halal requirements. Pempek hafish has a halal certificate issued by the Indonesian Ulema Council (MUI) which was issued on November 23 2021, and is still valid until November 23 2025.

d. Products

Halal fish processed products refer to processed fish products that comply with Islamic dietary laws (Shariah) and are permissible for consumption by Muslims. These products undergo various processing methods while ensuring that all ingredients and processes adhere to halal standards.

The products by Pempek Hafish are pempek lenjer, pempek adaan, pempek egg, pempek skin, apart from that, pempek hafish also produces tekwan products. Pempek and Tekwan Pempek Hafish distribute directly in their stalls and have frozen pempek which is distributed more widely, apart from being placed in stalls, this frozen pempek is distributed outside the region/city and even abroad. The frozen pempek product was packaged well, but it wasn't enough when packing without using gloves, and so on. The packaging does not have still a halal label.

e. Monitoring and Evaluation

Halal monitoring and evaluation refer to the processes and procedures implemented to ensure compliance with halal standards and regulations throughout various stages of production, distribution, and consumption of halal products and services. Halal monitoring begins with obtaining halal certification, regular inspections and audits are also needed to ensure ongoing compliance with halal standards. This includes inspecting production facilities, verifying the sourcing and handling of halal ingredients, and assessing the implementation of halal procedures. Detailed documentation of all processes, ingredients, suppliers, and certifications is essential for halal monitoring and evaluation.

Training programs are also conducted to educate employees about halal principles, practices, and procedures. This ensures that all personnel involved in the production, handling, and distribution of halal products understand their roles and responsibilities in maintaining halal integrity.

Hafish Food management regularly monitors and evaluates the halal production process for its products so that they continue to meet halal requirements and standards. Hafish Food needs to create operational standards in monitoring and evaluating the halal value chain, especially in training employees as implementers of the production process.

4.12 Findings and Recommendations for the Sustainability of the Halal Value Chain

Table 3. Findings and Recommendations

Findings	Recommendations
<p>The process of packaging frozen pempek products without using gloves</p>	<p>The packaging process is an important part of ensuring the integrity of halal products. The packaging process must comply with health and hygiene procedures, including the use of gloves to prevent contamination and maintain cleanliness. Wearing gloves is very important to prevent product contamination during the packaging process. This helps maintain the quality and safety of food products. Although gloves are not specifically mentioned in the context of halal certification, maintaining cleanliness through the use of gloves is in line with the principles of halal production and certification.</p>
<p>There is no halal label on the frozen pempek product packaging even though it is halal certified.</p>	<p>It is important to know that even though a product has obtained halal certification, it must still be given the appropriate halal certification label and symbol. This labeling is needed to provide information to consumers that the product is halal certified and to ensure that the product is not mistaken for a non-halal product. Labeling must be clear and visible, and must be placed in specific locations on the product packaging, as required by halal certification authorities. Therefore, if a product has received halal certification but does not have a halal label, it can cause confusion among consumers and may not be considered halal by some consumers. It is important to ensure that products are properly labeled and halal symbols to avoid confusion and safeguard halal certification integrity.</p>
<p>The production area is clean, but the cooling room looks a little messy and dirty.</p>	<p>Maintaining a neat and organized production environment is very important. This will provide time efficiency during production, maintain cleanliness and product quality that will meet halal standards in the production of pempek and other food products.</p>

5. CONCLUSION

Halal Value Chain is an important value in halal compliance in food businesses. In the case of processed fish food products, the main fish ingredient is not the main critical point, the Halal Value Chain must cover all aspects of the business management system, including the selection of raw materials, production processes, material storage, packaging, distribution, transportation and delivery to consumers. Halal standards and halal certification are important as benchmarks for the halal compliance of an MSME. The processed fish food products that we chose are Pempek and Tekwan, which are the most processed fish foods in Jambi City. Hafish Food is one of the MSMEs which produces halal processed fish in Jambi City.

We have simulated a Halal Value Chain for processed fish food products, especially Pempek and Tekwan products. We explain the halal value chain of processed fish food which already has halal standards and provide various input on several findings which in our opinion still have the potential for contamination with haram ones. We recommend that halal standards and halal compliance need to continue to be evaluated and monitored, even though the product already has halal certification. MSMEs needs to create operational standards in monitoring and evaluating the halal value chain, especially in training employees as implementers of the production process. That's why halal management is needed in MSMEs. Halal Management system is a critical aspect of the halal food supply chain, which involves managing halal food and beverage items from production to consumption. it must be monitored frequently by authorized institutions such as BPJPH or the halal task force (satgas halal).

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