

THE ANALYSIS ROLE OF TRIPLE HELIX IN THE DEVELOPMENT OF HALAL INDUSTRY: STUDY ON POULTRY SLAUGHTERHOUSE IN PONOROGO DISTRICT, EAST JAVA

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Abstract: Indonesia, as a country with the largest Muslim population, has a high demand for poultry products that are halal and safe for consumption. This study examines the role of the triple helix (government, academics, and business actors) in developing the halal industry in Poultry Slaughterhouses (RPU) in Ponorogo Regency. The research method used a qualitative approach through focus group discussions (FGD) located at the office of the Ministry of Religious Affairs of Ponorogo involving 15 participants from various parties who have roles of responsibility and main contributions in the development of the halal RPU industry in Ponorogo. The representatives came from the Ministry of Religious Affairs of Ponorogo, the Animal Husbandry Service, the Halal Product Guarantee Agency (BPJPH), educational institutions such as Darussalam Gontor University and Muhammadiyah University of Ponorogo, and poultry slaughterhouse business actors. The FGD was carried out in a structured manner with moderator guidance to explore the role of actors in halal certification of RPU. The results of the discussion were recorded, transcribed, and analyzed using open coding techniques to identify roles, obstacles, and potential collaborations that need to be carried out in the future. The narrative results are summarized to describe the Triple Helix synergy in the development of the halal industry in Ponorogo. The results showed that the government, through the Ministry of Religious Affairs, is expected to organize structured training related to halal slaughter and certification of halal butchers. BPJPH needs to increase socialization, assistance, and funding to facilitate halal certification, as well as simplify procedures and conduct periodic audits. The Livestock Service Office is expected to be active in educating the selection of healthy poultry animals and technical assistance to fulfill the Veterinary Control Number (NKV) requirements. Poultry farmers are expected to understand the importance of halal certification and fulfill the requirements to guarantee halal products. Academics play a role in education, training, and assistance in preparing certification documents. Thus, triple helix collaboration is key in developing the halal RPU industry in Ponorogo, where each party must carry out its role according to its capabilities based on the results of the FGD evaluation.

Keyword : BPJPH , Halal Certification, Halal Industry, Poultry Slaughterhouse (RPU), Triple Helix.

Abstrak: Indonesia sebagai negara dengan penduduk muslim terbesar memiliki permintaan yang tinggi terhadap produk unggas yang halal dan aman untuk dikonsumsi. Penelitian ini mengkaji peran triple helix (pemerintah, akademisi, dan pelaku usaha) dalam pengembangan industri halal pada Rumah Potong Unggas (RPU) di Kabupaten Ponorogo. Metode penelitian menggunakan pendekatan kualitatif melalui diskusi kelompok terfokus (FGD) yang berlokasi di kantor Kementerian Agama Ponorogo dengan melibatkan 15 peserta dari berbagai pihak yang memiliki peran tanggung jawab dan kontribusi utama dalam pembangunan industri halal RPU di Ponorogo. Adapun perwakilan tersebut berasal dari pihak Kementerian Agama Ponorogo, Dinas Peternakan, Badan Penyelenggara Jaminan Produk Halal (BPJPH), lembaga pendidikan seperti Universitas Darussalam Gontor dan Universitas Muhammadiyah Ponorogo, serta pelaku usaha rumah potong unggas. FGD dilaksanakan secara terstruktur dengan panduan moderator untuk menggali peran aktor dalam sertifikasi halal RPU. Hasil diskusi direkam, ditranskrip, dan dianalisis dengan teknik open coding untuk mengidentifikasi peran, hambatan, dan potensi kolaborasi yang perlu dilakukan kedepannya. Narasi hasil disusun ringkas untuk menggambarkan sinergi Triple Helix dalam pengembangan industri halal di Ponorogo. Hasil penelitian menunjukkan bahwa pemerintah melalui Kementerian Agama diharapkan dapat menyelenggarakan pelatihan terstruktur terkait penyembelihan halal dan sertifikasi juru sembelih halal. BPJPH perlu meningkatkan sosialisasi, pendampingan, dan pendanaan untuk memperlancar

sertifikasi halal, serta menyederhanakan prosedur dan melakukan audit berkala. Dinas Peternakan diharapkan berperan aktif dalam melakukan edukasi pemilihan hewan unggas yang sehat dan pendampingan teknis pemenuhan ketentuan Nomor Kontrol Veteriner (NKV). Peternak unggas diharapkan memahami pentingnya sertifikasi halal dan memenuhi ketentuan untuk menjamin kehalalan produk. Akademisi berperan dalam edukasi, pelatihan, dan pendampingan penyusunan dokumen sertifikasi. Dengan demikian, kolaborasi triple helix menjadi kunci dalam pengembangan industri RPU halal di Ponorogo, di mana masing-masing pihak harus menjalankan perannya sesuai dengan kapabilitasnya berdasarkan hasil evaluasi FGD.

Keyword : BPJPH, Industri Halal, Rumah Potong Unggas (RPU), Sertifikasi Halal, Triple Helix.

Introduction

Along with the needs of Muslims in complying with Islamic law in every aspect of life, the Government of Indonesia fully contributes to supporting the development of the halal industry.¹ As a country with the largest Muslim population in the world which reached 231.6 million in 2022,² Indonesia plays an important role in developing the halal industry both nationally and globally. The government issued regulations related to the fulfillment of halal standards in various aspects such as food, beverages, clothing, raw materials, and the like, so that based on Law No. 33 of 2014 concerning Halal Product Guarantee, it states that halal products are produced through the halal product process, which is a series of activities (processes) to ensure the halalness of the product, including the provision of ingredients, processing, storage, packaging, distribution, sales, and presentation of products.³ Apart from taking regulatory steps as an effort to develop the halal industry.

As a form of support for the fulfillment of halal standards, the Indonesian government issued a certification program to certify halal standards so that business actors have the right to provide a halal logo so as to build consumer confidence regarding the halal quality provided or produced by these producers and business actors. In an effort to become the world's halal center and a pioneer in the globalization of the halal industry and accommodate the market potential of domestic halal products, Indonesia formed an agency authorized to carry out the certification process called the Halal Product Guarantee Agency (BPJPH) and collaborated with the Indonesian Ulema Council (MUI) in the halal fatwa process. There are two paths for the Indonesian people in applying for halal certification through the Free Halal Certification (SEHATI) program and the regular or paid path. In the course of the halal certification process from 2019 to 2024 at this time, after the government focuses on the halal aspects of consumption products both food and beverages, the next is to focus on service providers of consumption materials that are classified as critical to their halalness, namely animal slaughter services both cattle, goats and poultry which are then called slaughterhouse (RPH) and poultry slaughterhouse (RPU) business actors.

One aspect that is the focus in the development of the halal industry is the Poultry Slaughterhouse (RPU), the Poultry Slaughterhouse (RPU) is a business activity engaged in the provision of poultry slaughter services and poultry meat sales services, usually people use RPU services to facilitate cooking activities and the business of selling cut poultry meat. The community's need for duck and chicken meat raw materials is very high for daily needs,

1 Hadiyanto Abdul Rachim and Meilanny Budiarti Santoso, "Mengarusutamakan Halal Lifestyle: Antara Peluang Dan Tantangan Kapasitas Perlindungan Sosial Dalam Trend Global," *AdBispreneur* 6, no. 2 (2021): 151, <https://jurnal.unpad.ac.id/adbispreneur/article/view/33085>.

2 The Royal Islamic Strategic Studies Center. *The Muslim 500 - The World's 500 Most Influential Muslim 2022*. 2022. (Accessed, 23 January 2025)

3 Undang-Undang Republik Indonesia Nomor 33, "Jaminan Produk Halal". 2014.

either for personal consumption or processed into dishes for sale. Observations made in the field, especially in the Ponorogo area of East Java, show that there are more than 50 RPU established with varying scales from home to industrial scale. The Central Bureau of Statistics provides data on the total population of Ponorogo district is 949,320 people from a total of 21 sub-districts or 279 villages (Central Bureau of Statistics, 2020).⁴

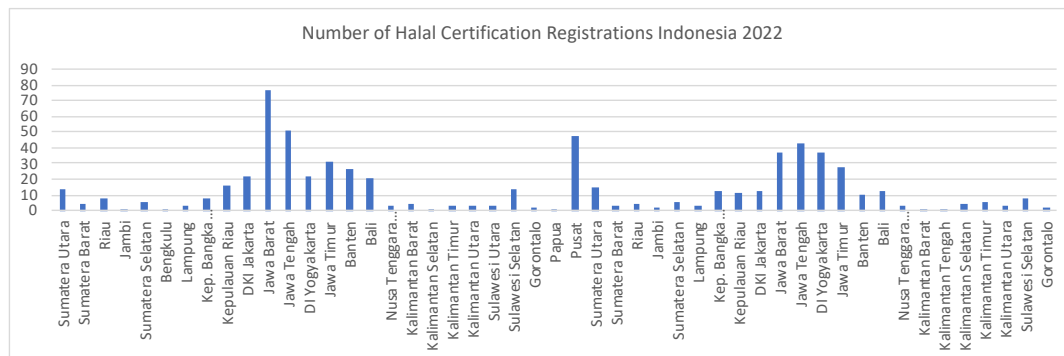


Diagram 1.2 Number of Halal Certification Registrations Indonesia 2022

Data on the number of halal certification registrations for Poultry Slaughterhouses / Slaughterhouses (RPU / RPH) in Indonesia in 2022 shows that there are serious efforts from various provinces in meeting halal standards for meat products.⁵ Halal certification is important not only as a fulfillment of Islamic law, but also as a guarantee of product safety and quality for consumers. This data indicates that provinces such as West Java, Central Java and DKI Jakarta have a significant number of halal-certified RPU/RPH, reaching 77, 51 and 22 units respectively. This reflects the high awareness of business actors in these areas of the importance of halal certification.

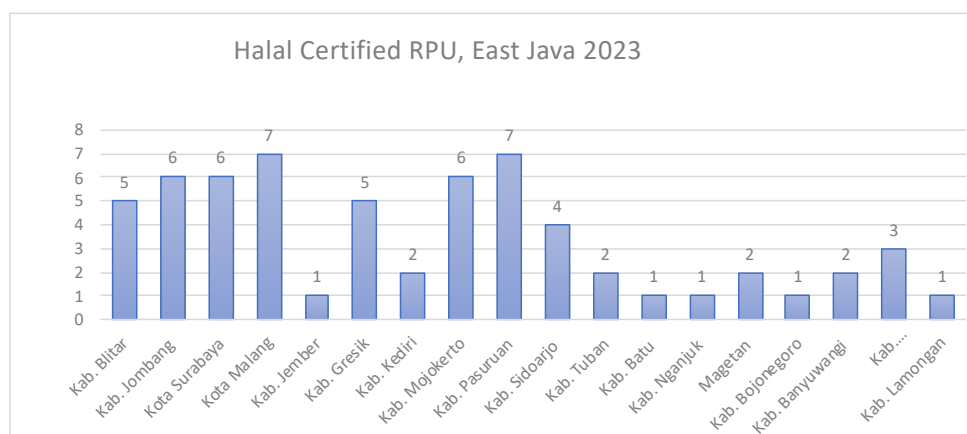


Diagram 1.2 Halal Certified RPU, East Java 2023

In fulfilling the basic needs of the community, chicken meat is one of the menus that cannot

⁴ Badan Pusat Statistik Kabupaten Ponorogo. "Jumlah Penduduk Menurut Jenis Kelamin di Kab. Ponorogo, 2018-2020", 26 April 2021. <https://ponorogokab.bps.go.id> (Accessed, 6 October 2024).

⁵ <https://satudata.kemenag.go.id/dataset/detail/jumlah-pendaftaran-sertifikasi-halal-menurut-jenis-produk> (Accessed, 25 February 2025)

be avoided from the daily lives of Ponorogo residents. Based on diagram 1.1, it is unfortunate that 99% of poultry slaughterhouses do not yet have halal certification issued by the Halal Product Guarantee Agency (BPJPH) from the Ponorogo district government.⁶ Even though the amount of poultry meat sold and consumed by the community has reached thousands of tons in daily demand.

This is a very concerning problem in Ponorogo, by looking at the data that the majority of the population are Muslim citizens who are obliged to consume halal food, both in terms of its origin, how to obtain it and ensure that the food is processed properly according to Islamic law, but in fact the guarantee of halalness in duck and chicken products does not yet have a legal and official certification guarantee from the Indonesian Government. This raises deep concerns from academics regarding how the role of the local and provincial governments, in this case the Ministry of Religious Affairs, BPJPH, and the Livestock Service Office, in its implementation, guarantees the food safety of the community, as well as the halalness (thayyib) of chicken slaughtered by individuals/business actors of the Poultry Slaughterhouse (RPU), while also revealing the facts of how the role of academics, and business actors in their role in ensuring the halalness of duck and chicken meat products in Ponorogo. In fact, it is not certain that the slaughterers of poultry, both ducks and chickens, understand the procedures for good and correct slaughter according to Islamic law, so as to make halal food remain halal for consumption, not become haram because of the wrong slaughter process or lack of knowledge about Islamic law.

However, there is still little research on halal certification in the poultry slaughterhouse sector that specifically examines the dynamics of roles between stakeholders in a regional context. Most previous studies have focused on consumer perceptions of the halal label, the impact of certification on purchase intentions, or administrative barriers in the certification process⁷, role of triple helix actors, namely the government, business actors, and academics in encouraging the realization of halal-certified poultry slaughterhouses, especially through a collaborative approach at the local level, is still very limited. In addition, most of the research approaches used are quantitative surveys, which are unable to explore in depth the roles and challenges between institutions in a contextual and dialogical manner.

This gap is an important reason to use a qualitative approach with a focus group discussion (FGD) method, in order to obtain a richer understanding of the roles, obstacles, and potential for collaboration between stakeholders in Ponorogo Regency. The Ponorogo region itself has unique socio-cultural aspects, where the practice of slaughtering poultry is still dominated by small- and medium-scale business actors with relatively low halal awareness, even though the majority of the population is Muslim. The fact that 99% of RPUs in this region do not yet have halal certificates indicates a critical condition that requires policy-based intervention and cross-actor education. In this context, the triple helix approach is a relevant framework for exploring the potential for synergy between parties in building an effective and sustainable halal certification system.

Thus, this study has a high urgency to provide contributions both theoretically and practically.

6 <https://halal.unair.ac.id/blog/2023/08/21/data-rumah-potong-hewan-di-jawa-timur-yang-sudah-bersertifikat-halal/> (Accessed, 23 February 2025)

7 Mohamed Syazwan Ab Talib, Thoo Ai Chin, and Johan Fischer, "Linking Halal Food Certification and Business Performance," *British Food Journal* 119, no. 7 (2017): 1606–1618.

From a theoretical perspective, this study expands the application of the Triple Helix concept in the context of the halal industry, especially in the poultry slaughterhouse sector which has so far escaped the spotlight of academic studies. This study offers a new collaborative framework that shows the dynamics of the roles faced by local actors in the halal certification process. The qualitative approach used also fills the methodological gap in halal research which has so far been dominated by quantitative studies.

Meanwhile, from a practical perspective, the findings of this study serve as the basis for compiling applicable policy recommendations to strengthen collaboration between the government, academics, and business actors in accelerating halal certification in Ponorogo. This study is expected to be a reference in designing halal slaughter training programs, simplifying certification procedures, increasing technical assistance for RPU business actors, and encouraging more active involvement from higher education institutions. In addition, this study can be used as a model for cross-sector collaboration that can be replicated in other regions with similar challenges, thus contributing to strengthening the national halal industry ecosystem.

This research will answer two problem formulations, namely: (1) What is the role of the Triple Helix actors (government, academics, and business actors) in developing the halal industry at the Ponorogo Poultry Slaughterhouse (RPU), and (2) what collaborative strategies are carried out by the three actors in encouraging the strengthening of the halal industry in the region.

Literature Review

Definition of Triple Helix

The Triple Helix model introduced by Etzkowitz and Leydesdorff (1995) emphasizes the importance of collaboration between three main actors, namely government, academics, and business actors in supporting the innovation process and development of strategic sectors, including in the halal industry⁸. In the context of the halal industry, the Triple Helix approach is very relevant because each actor plays a complementary role. The government acts as a regulator and facilitator of halal policies, academics contribute to the development of halal knowledge, training, and education, while business actors act as implementers and beneficiaries of the halal certification system.

Previous research highlighted that the halal certification process at Slaughterhouses (RPH) faces administrative barriers and quite high costs, but can be overcome through the collaborative role of the government and academics who provide technical assistance and training⁹. Likewise, a study in Bangkalan Regency showed that business actors' awareness of the importance of halal certification increased when there was structured intervention from the three parties in the Triple Helix¹⁰. This shows that a collaborative approach is crucial in the context of poultry

8 Henry Etzkowitz and Loet Leydesdorff, "The Dynamics of Innovation: From National Systems and 'Mode 2' to a Triple Helix of University-Industry-Government Relations," *Research Policy* 29, no. 2 (2000): 109–123. the national organization of the system of innovation has historically been important in determining competition. Reorganizations across industrial sectors and nation states, however, are induced by new technologies (biotechnology, ICT)

9 Muhamad Mustahal, "Halal Certification in Slaughterhouses (RPH) Impacts on Halal Certification of Animal-Based Food Products," *AL-MANHAJ: Jurnal Hukum dan Pranata Sosial Islam* 4, no. 2 (2022): 399–408. the awareness of RPH to certify halal RPH is still very low, so micro and small business actors feel they are getting halal-certified materials for their products. This research will focus on the regulation of halal certification in animal house services (RPH)

10 Fauzan M and Faiz Nashrullah, "Analisis Kesiapan Pelaku Usaha Rumah Potong Unggas Di Kecamatan Tanah Merah Kabupaten Bangkalan Terhadap Sertifikasi Halal," *Journal of Islamic Economic and Law* 1 (2025): 74–81.

slaughterhouses, the majority of which are still at the MSME level and face limited resources.

By taking a case study in Ponorogo Regency, which has strong religious and traditional characteristics, this study seeks to provide a theoretical contribution by expanding the scope of the Triple Helix concept so that it does not only focus on the structural institutional aspects, but also includes local socio-cultural dynamics that play a role in the successful development of the halal industry in the RPU sector.

Actors and Role of Triple Helix

The role of each main actor in the triple helix concept is explained in more detail as follows:

1. The government acts as a regulator and facilitator

in the Triple Helix concept in supporting the development of the halal industry. The main role of the government as a regulator is to design policies that protect the halal industry, especially focusing on poultry slaughterhouse MSMEs in Ponorogo district. On the other hand, the government becomes a facilitator that oversees business actors by providing understanding and guidance needed by poultry slaughterhouse business actors to obtain halal certification more easily, in an effort to build a sustainable halal industry in Ponorogo district. This aligns with the Triple Helix model where government plays a central role in shaping innovation environments, particularly through regulation and enabling inter-organizational cooperation ¹¹

The government has filled the role of regulator by issuing Law Number 33 of 2014 concerning Halal Product Guarantee (UUJPH), with a focus on guaranteeing the halal industry for legal certainty of consumer goods and providing guidance on product production and marketing for business actors. As a facilitator, the government is responsible for building understanding and awareness of halal assurance regulations among business actors, especially within poultry slaughterhouses in Ponorogo. This facilitative role is often realized through technical training, extension services, and collaborative support mechanisms that connect businesses with academic and religious institutions ¹².

2. Academic's role

Higher education is a place for students and scholars who have the ability to think creatively to contribute to the good of society by producing the necessary outputs. Universities act as educators for poultry slaughterhouse business actors in the development of the halal industry through collaboration with the government in coaching and training programs to guarantee the halalness of poultry products to consumers. In fact, universities act as facilitators by becoming a bridge for the three main actors in opening communication networks and discussion spaces in overcoming problems during the halal industry development process ¹³.

3. The role of business actors

In the Triple Helix concept, business actors play an important role as the spearhead in

11 Etzkowitz and Leydesdorff, "The Dynamics of Innovation: From National Systems and 'Mode 2' to a Triple Helix of University-Industry-Government Relations." the national organization of the system of innovation has historically been important in determining competition. Reorganizations across industrial sectors and nation states, however, are induced by new technologies (biotechnology, ICT)

12 Danarti Hariani, "Penerapan Model Triple Helix Bagi Pengembangan UMKM Halal Food Indonesia Abstrak Data Tersebut , Dapat Dilihat Bahwa Muslim Nusantara Merupakan Potensi Dan Islam Yang Kuat , Maju , Dan Makmur . Makanan Halal (Halal Food). Kesadaran Itu Terlihat Dari Kon," Jurnal Ilmiah Ekonomi Manajemen dan Akuntansi 5, no. 1 (2024): 1–14.

13 Assefa Tesfaye Hailu, "The Role of University–Industry Linkages in Promoting Technology Transfer: Implementation of Triple Helix Model Relations," Journal of Innovation and Entrepreneurship 13, no. 1 (2024).

the development of the halal industry in Ponorogo Regency. They are the parties who directly apply halal principles in daily operational practices, especially in the slaughtering and distribution of poultry products. The success of the halal certification program is largely determined by the readiness and awareness of business actors in fulfilling all the requirements set, such as having a halal-certified slaughterer, a Veterinary Control Number (NKV) document, and a commitment to maintaining sanitation and product quality ¹⁴.

Definition of Halal Industry

The halal industry is defined as a series of industrial activities ranging from the acquisition of raw materials, processing of raw materials, to the acquisition of outputs carried out by utilizing resources and methods permitted by Islamic religious law ¹⁵. In addition, the halal industry has other terms such as sharia industry or Islamic industry. The halal industry covers many aspects of this type of business activity such as hall food, clothing codes, tableware, logos, and halal certificates.¹⁶

Consumer awareness of safe, quality, and religiously-compliant products is driving demand for halal products. The following are the challenges faced by the halal industry in fulfilling its responsibility to consumers.

Complexity of Halal Certification

The level of difficulty in applying halal certification has made poultry slaughterhouses in Ponorogo district ignore the urgency of halal assurance of the final product, resulting in all poultry slaughterhouses not having halal certification. The problem becomes the main focuses in advancing the halal industry, business actors and the public are still not aware of the importance of halal certificates as a guarantee of the halalness of the products produced. In addition, there are several challenges for business actors where there are limited expenses to apply for certification such as audit fees, testing fees, and administrative costs needed to fulfill the requirements, thus hampering the participation of MSMEs in the halal industry. Crucial efforts made on these problems can be overcome by simplifying the halal certification process to increase the contribution of producers or business actors in advancing the halal industry more freely and sustainably.

Halal Raw Materials

A crucial aspect of the halal industry that requires significant attention is the complexity associated with raw materials. The complexity of modern supply chains presents substantial challenges in tracing the origin and verifying the halal status of raw materials. This phenomenon indicates that the halal integrity of raw materials is an essential component in the halal industry ecosystem, which has multidimensional implications including aspects of religiosity, consumer perception and trust, and compliance with regulatory standards in the context of the global

14 Hartomi Maulana et al., "Determinants of Pentahelix Model in Developing the Halal Industry," *International Journal of Halal Research* 7, no. 1 (2025).

15 Ramadhan Razalia, Angga Syahputra, and Almira Keumala Ulfah, "Industri Halal Di Aceh: Strategi Dan Perkembangan," *Jurnal Al-Qardh* 6, no. 1 (2021).

16 Muhammad Fikry Aransyah, Finnah Furqoniah, and Amjad Hamad Abdullah, "The Review Study of Halal Products and Its Impact on Non-Muslims Purchase Intention," *Ikonomika* 4, no. 2 (2019): 181–198.

market.¹⁷ This complexity emphasizes the urgency of developing a comprehensive traceability system and implementing verification protocols to ensure halal integrity throughout the supply chain, so as to meet consumer expectations and ensure compliance with increasingly stringent international regulations.

Halal Product Counterfeiting Fraud

The complexity of global supply chains in the context of food and consumer goods production presents significant challenges in terms of transparency and traceability of origins and production processes. This phenomenon creates structured vulnerabilities that potentially facilitate counterfeiting and fraud practices that are difficult to detect.¹⁸ Luthviati & Jenvitchuwong (2021) suggest that the high economic attractiveness of the halal industry is positively correlated with incentives to commit acts of fraud and counterfeiting. Producer or supplier entities operating outside ethical norms may be motivated by the potential for significant financial gain through manipulating products to superficially meet halal criteria, without actually complying with comprehensively established halal standards.¹⁹ This phenomenon underscores the urgency of implementing stricter verification and surveillance systems in the halal industry supply chain to mitigate the risk of counterfeiting and ensure the integrity of halal products.

Research Method

This study uses a qualitative approach to produce descriptive data in the form of spoken and written words and observed behavior, with a focus on the development of the halal industry in Poultry Slaughterhouses (RPU) in Ponorogo Regency. Data collection was carried out through primary sources with the main method in the form of Focus Group Discussions (FGD) located at the Ponorogo Ministry of Religious Affairs Office, involving 15 participants from various parties who have roles, responsibilities, and main contributions in the development of the halal RPU industry in Ponorogo. The representatives came from the government (Ministry of Religious Affairs, BPJPH, and the Animal Husbandry Service), academics (lecturers and students from Darussalam Gontor University and Muhammadiyah University of Ponorogo), and RPU business actors. In addition to FGD, other methods used in the data collection process include observation, documentation, and triangulation. FGDs were carried out in a structured manner with guidance from a moderator to explore the roles, obstacles, and potential for collaboration between actors in encouraging halal certification. The results of the discussions were recorded and transcribed, then analyzed using open coding techniques to identify the main themes. Furthermore, the results of the analysis are arranged in the form of a descriptive narrative to describe the Triple Helix synergy in supporting the development of the halal industry in Ponorogo.

Results & Discussions

Results of the Focus Group Discussions (FGD) on the role of the triple helix in building a halal poultry slaughterhouse in Ponorogo district

17 A. Fageh, "Building A Synergy Between the Halal Industry and The Green Industry in The Maqasid Syari'ah Review as The Basis of Islamic Economics," *J. Islam. Econ. Laws* 5, no. 1 (2022): 139–158.

18 U. Triana, "Pengaruh Sertifikasi Halal, Kesadaran Halal, Bahan Makanan, Dan Citra Merek Produk Terhadap Minat Beli Produk makanan Halal (Studi Kasus Mahasiswa Muslim Di Malang)" (2021).

19 R. D. Luthviati and S. Jenvitchuwong., "Implementation of Halal Product Assurance in the Pharmaceutical Sector in Indonesia," *J. Hum. Rights, Cult. Leg. Syst.* 1, no. 3 (2021): 179.

In this section, the results of the FGD will be presented, which is a description of the role that has been carried out so far by the triple helix in its role in realizing the halal RPU industry in Ponorogo Regency.

Table 1. The role of Triple Helix in the halal RPU industry in Ponorogo

Triple helix Party	Theoretical role	Role that has been implemented	Conclusion
Government Party BPJPH Ponorogo task force	BPJPH As a government institution responsible for implementing halal product assurance policies and the main facilitator in the halal certification process	We have conducted training on sharia-compliant slaughtering at Ponorogo RPH, but it has not been carried out comprehensively and intensively. Usually we only hold training before Eid al-Adha, not specifically targeting poultry slaughterhouse (RPU) businesses,” (Mr. Moh. Nurul Huda, M.Pd – Head of the Ministry of Religious Affairs of Ponorogo, FGD results).	Government support is still limited, fragmented and unstructured
The Ministry of Religious Affairs Office	The Ministry of Religious Affairs has a strategic role as a religious authority that ensures that the implementation of halal principles, especially in poultry slaughtering, is carried out in accordance with Islamic law	We have socialized the importance of halal certification to business actors, and have also assigned extension workers in each village to provide education related to the procedures and stages of submitting halal certification for RPU. However, in the field, the certification process still faces major obstacles. The requirements are quite strict and the costs are high, so many business actors are unable to follow. We at BPJPH Ponorogo also do not have an incentive budget to help them take care of certification,” (Hj. Ifrotul Hidayah – BPJPH Ponorogo Task Force, FGD results).	
Animal Husbandry Service	The Animal Husbandry Service acts as a technical agency that guarantees aspects of animal health, food safety, and sanitation quality in the poultry slaughtering process as well as providing technical education related to animal selection	““We from the Animal Husbandry Service have conducted inspections at a number of poultry slaughterhouses in the market, to ensure that the animals sold are in healthy condition and the slaughtering process is in accordance with Islamic law. However, this program has not been scheduled intensively, only periodically and the time is uncertain” (Drh. Wikan Dedi Astuti - Ponorogo Animal Husbandry Service, FGD results). We also provide guidance to business actors on the procedures for slaughtering poultry properly and correctly according to Islamic law, but it is not yet comprehensive in all poultry slaughterhouses and markets that sell poultry meat in Ponorogo Regency” (Drh. Siti Barokah – Head of Animal Health Services, Ponorogo Animal Husbandry Service, FGD results).	

Academics	As a provider of knowledge and educational facilitator in training and research related to the halalness of RPU and playing a role in bridging science, policy, and practice in the field through research and mentoring.	So far, we as academics have not been directly involved in building the halal industry, especially for consumer products from RPU. Our contribution is still very limited.” (Dr. H. Meitria Cahyani – Darussalam Gontor University, FGD results). We do not yet have a strong enough collective awareness to be actively involved in ensuring the halalness of poultry products consumed by the public from RPU in Ponorogo.” (Azis Riat Winanto, M.E. – Muhammadiyah University of Ponorogo, FGD results). Limited role of academics as educators and facilitators	The limitations of the role of academics as educators and facilitators
MSMEs	As direct implementers of halal principles in RPU operations and actively play a role in submitting certification, meeting standards, and implementing halal systems	“Most poultry slaughterhouse business actors here do not really understand the importance of halal certification. and do not understand why it is needed.” (Bambang Setia Utomo – Head of Khizanah Gontor RPH, FGD results). “We do not know how to apply for halal certification to BPJPH. We have not fulfilled the requirements, such as SKKNI and NKV. It all feels complicated to us.” (Mrs. Muji – Muhammadiyah Ponorogo RPH, FGD results). When it comes to documents and standards such as NKV, we do not have them yet. So far we have only run our business as usual, no one has ever provided technical guidance.” (Mrs. Nur Cahaya – RPH Cahaya Ayam Jetis, FGD results).	Low Halal Literacy and Technical Capacity

Based on the results of the Focus Group Discussion (FGD) conducted by involving government elements, academics, and business actors in Ponorogo Regency, it was found that the implementation of the Triple Helix principle in the development of the halal industry, especially in Poultry Slaughterhouses (RPU), has not been running optimally. The imbalance in contributions between parties and weak program integration are the main obstacles in realizing halal-certified RPU.

a. The Role of Government: Fragmented and Less Structured

The role of the government through the Ministry of Religious Affairs and the Halal Product Guarantee Agency (BPJPH) has so far been sporadic and not systematically planned. The Head of the Ponorogo Ministry of Religious Affairs stated that halal slaughter training “is usually only held before Eid al-Adha” and has not specifically targeted RPU. This statement shows that the training program has not been positioned as a sustainability strategy, but rather only as a seasonal activity.

In addition, limited budget support is also a crucial obstacle. Hj. Ifrotul Hidayah from the BPJPH Task Force revealed that although counseling and socialization have been carried out, “we do not yet have an incentive budget to help them take care of certification.” This is

evidence that the policy structure has not been accompanied by a concrete funding scheme to encourage micro and small business actors.

Meanwhile, the Animal Husbandry Service as a technical agency also faces similar challenges. Technical inspections and education have been carried out, but are periodic and not comprehensive. As explained by Drh. Wikan Dedi Astuti, “this program has not been scheduled intensively, only periodically and the time is uncertain.” This shows that there is no consistent policy roadmap to foster RPU actors in aspects of animal health, sanitation, and halal slaughter

b. The Role of Academics: Still Passive and Symbolic

From the academic side, the expected role as a facilitator of education, technical training, and research is still not seen significantly in the context of halal RPU. Direct recognition from Dr. H. Meitria Cahyani stated that “our contribution is still very limited,” and there is not even a collective awareness among academics to actively assist business actors. In fact, in the Triple Helix framework, academics have a strategic position to bridge policy needs and technical needs in the field through applied research and community service.

This lack of involvement shows that higher education institutions in Ponorogo have not internalized the urgency of developing the halal industry in their tridharma agenda. As a result, business actors do not receive adequate assistance in preparing technical documents, such as the Indonesian National Work Competency Standards (SKKNI), Veterinary Control Numbers (NKV), or halal audit documents.

c. Business Actors: Low Halal Literacy and Technical Capacity

RPU business actors in Ponorogo are the parties most affected by the weak collaboration between actors. The results of the FGD showed that the majority of business actors do not yet understand the urgency of halal certification. This was revealed by the statement of Bambang Setia Utomo, “not really understanding the importance of halal certification,” and Mrs. Muji who said, “we don’t know how to apply for halal certification to BPJPH.” This reflects not only the lack of halal literacy, but also weak access to information and technical assistance.

In addition, the absence of important legal documents such as NKV is an obstacle that hinders the certification process. As expressed by Mrs. Nur Cahaya from RPH Cahaya Ayam Jetis, “so far we have only run our business as usual, no one has ever provided technical guidance.” This indicates that the coaching and mentoring system for business actors has not been integrated into cross-institutional strategies.

Triple Helix Collaboration Strengthening Strategy Analysis

To overcome the various obstacles found in the implementation of the Triple Helix collaboration in Ponorogo, concrete and strategic steps are needed from each party so that their role is not only symbolic, but operational and has a real impact.

The government, through the Ponorogo Ministry of Religion, is expected to be able to organize more intensive and scheduled coaching and training programs for Poultry Slaughterhouse (RPU) business actors, especially regarding halal slaughter procedures in accordance with

Islamic law. This is important to ensure that slaughter practices at RPU not only meet religious standards, but also meet community expectations regarding the halalness of consumer products. In addition, the Ministry of Religion also plays an important role in providing training facilities for officially certified halal slaughterers, which is one of the main requirements for submitting halal certification to BPJPH.

The Halal Product Assurance Organizing Agency (BPJPH) Ponorogo has a strategic responsibility to disseminate the procedures and flow of halal certification applications widely and easily understood by RPU actors. In addition, BPJPH is also expected to provide intensive assistance in preparing technical documents needed for certification purposes. One of the main challenges faced by business actors is the burden of certification costs. Therefore, BPJPH needs to provide assistance facilities in the form of halal certification quotas funded by the central government to ease this burden. No less important, BPJPH must also ensure that there are periodic post-certification audits so that halal values are maintained and do not stop at administrative aspects alone.

The Ponorogo Regency Animal Husbandry Service is responsible for the technical and sanitation aspects of the poultry slaughtering process. Therefore, this service needs to improve education for RPU actors in terms of selecting healthy, consumable, and sharia-compliant poultry. In addition, the Animal Husbandry Service also has an important role in assisting business actors in fulfilling administrative requirements such as the Veterinary Control Number (NKV), which is a mandatory document in submitting halal certification. The active involvement of the Animal Husbandry Service will help improve the hygiene standards and quality of local poultry products circulating in the community.

Academics also have a crucial position in supporting the development of the halal industry in the RPU sector, especially in the fields of education, training, and technical assistance. The involvement of academics is needed to provide conceptual and practical understanding to business actors regarding the urgency of halal certification and the technicalities of its preparation. In addition, academics also have the potential to act as halal supervisors who ensure that the RPU production process runs according to standards. Through synergy between science and industry needs, academics can bridge communication between business actors and government institutions in preparing documents, training, and assistance in every stage of the certification process.

Finally, **RPU business actors** must raise higher awareness regarding the importance of implementing halal principles in every aspect of the production process. This awareness must be followed by a commitment to fulfill all halal certification requirements, starting from the presence of halal slaughterers who are certified according to the Indonesian National Work Competency Standards (SKKNI), the presence of halal inspectors, to ownership of supporting documents such as the Veterinary Control Number (NKV). Business actors not only need to be recipients of assistance or fostered objects, but must also actively build a production system that is in accordance with sharia and national halal regulations.

Conclusion

This study shows that the implementation of the Triple Helix model in the development of the halal industry at the Poultry Slaughterhouse (RPU) in Ponorogo Regency still faces major

challenges, both in terms of coordination between actors, implementation commitment, and policy and technical support. The results of the Focus Group Discussion (FGD) revealed that the synergy between the government, academics, and business actors has not been running optimally. Each actor has a very important strategic role, but in practice there are still inequality in contributions, limited resources, and the absence of sustainable program integration.

Local governments, in this case the Ministry of Religious Affairs, BPJPH, and the Animal Husbandry Service, have initiated initiatives to support the halal certification process, but have not been institutionalized in a structured policy system. Training and socialization programs are still seasonal and have not reached all RPU actors as a whole. Likewise, budget constraints and procedural complexity are the main obstacles that prevent business actors from being able to go through the certification process independently. Academics have also not fully played their role as educational facilitators and technical assistants in the development of the local halal industry. Meanwhile, business actors still do not understand the urgency of halal certification, do not have supporting technical documents such as NKV, and have minimal access to information and training.

Theoretically, this study expands the application of the Triple Helix concept in the context of halal industry development, especially in the RPU sector which has not been studied in depth in academic studies. The qualitative approach used opens up a more comprehensive understanding of social relations, barriers to collaboration, and collaborative strategies needed to encourage the transformation of the halal industry based on local communities. This study also fills the methodological gap that has been dominated by quantitative studies and normative approaches in the field of halal studies.

From a practical perspective, this study produces an operational strategy formulation that can be used as a reference to strengthen the effectiveness of the Triple Helix collaboration in Ponorogo in the future. First, the Ponorogo Ministry of Religion is expected to develop a structured, sustainable halal slaughter training program that reaches all RPU actors. Second, BPJPH must expand the socialization of halal certification procedures, simplify the application flow, and provide a funding scheme to help MSMEs overcome the burden of certification costs. Third, the Animal Husbandry Service needs to increase the capacity of technical education in selecting poultry that meets sharia standards, and provide administrative assistance to fulfill the Veterinary Control Number (NKV) document. Fourth, academics are expected to be involved not only as knowledge providers, but also as trainers, document preparation assistants, and independent supervisors in the halal certification process. Finally, RPU business actors must increase awareness and commitment to halal standards, and actively participate in training, meet certification requirements, and adopt a halal management system in their operations.

By strengthening the strategy, it is expected that the Triple Helix model will not only be a theoretical framework, but can be realized in the form of sustainable collaborative policies, programs, and practices. Synergy between actors must be built through intensive communication, integration of cross-institutional programs, and active participation from all related parties. Only in this way can the halal industry in the RPU sector in Ponorogo grow sustainably, meet sharia demands, and provide credible halal assurance to the wider community.

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