

# Challenges in Developing Integrated Halal Industry in Indonesia

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This study aims to determine the opinions and recommendations of experts regarding the problems of the integrated halal industry in Indonesia to determine the priority of the most important variables to be fixed first. This research was conducted in September 2020 using primary data obtained from interviews of experts consisting of academics, practitioners and regulators with a background in sharia economics. The data were analyzed by the Delphi method to find the main priority and agreed upon convergence by experts. The results showed that of the 6 criteria for integrated halal industry problems in Indonesia, there are 22 variables with convergent-convergent consensus based on expert opinion and only 2 variables with Divergent consensus. The 3 main priority problems of the integrated halal industry in Indonesia along with the problems in the sub-criteria are (1) Regulation & Policy: Implementation, (2) Information Technology & Services: Accessibility, (3) Public Awareness: Socialization. This research can be used by readers to make improvements in the halal industry system in Indonesia with priorities according to the findings of this study. This research is the first research to comprehensively calculate the expert's assessment regarding the integrated halal industry problem in Indonesia using the Delphi method and its priority recommendations.

**Keywords: Halal Industry; Delphi; Indonesia**

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## INTRODUCTION

The halal industry continues to develop rapidly along with the growth of the world's Muslim population. The halal industry is based on adherence to sharia, which has implications for values, integrity and trust that affect all aspects of a Muslim's life (Vanany et al., 2019). The scope of the halal industry is now more than just the food and beverage industry, but also finance, logistics, transportation, halal standards, certification, medicines, cosmetics to tourism which have the potential to make the halal industry grow rapidly.

At present, the products of the halal industry, especially the food industry, are increasingly popular among global consumers, this is due to tests that show halal products are healthier, safer and of high quality in all supply-chain activities that do not conflict with Sharia provisions (Azmi et al., 2019). There are various factors that can influence the development of the halal industry (Ab Rashid & Bojei, 2019).

In Indonesia, the increasing growth of Islamic awareness by its adherents has an effect on increasing the purchasing power of Muslim consumers for halal industrial products, resulting in the emergence of a new wave that affects the business world. A report from the State of the Global Islamic Economy shows that Indonesia ranks first in the list of consumers of halal food products, but has not been able to maximize the potential of this market so that it is ranked 10th for the ranking of world halal food producers (Mubarok & Imam, 2020).

Halal products that are output from the halal industry are defined in various forms, including food, cosmetics, medicines whose contents are permitted under sharia law (Rohman & Windarsih, 2020). Billah et al. (2020) found that understanding of the meaning and urgency of halal is a part of influencing consumer behavior and their purchase intention in relation to sustainable consumption, so knowledge and education about halal needs to be improved. At present, many companies have produced Islamic products but their business is still related to the production process which is not acceptable in Islam (Junusi, 2020), W. Khan et al. (2020) also stated that a trust-based supply chain

such as a halal value chain (Antonio et al., 2020) is important. Because, even though the substance of the product is halal, the process of obtaining it is not in accordance with the Sharia, so the food is not allowed under the maqashid sharia (Idris et al., 2020).

In addition to considering what products can be consumed by a Muslim, the halal industry also needs to consider how to dress, entertainment that can be enjoyed, lifestyle and behavior (Jafari & Scott, 2014). So it is not only limited to the food and beverage sector, but also includes the financial sector such as banking and insurance, the lifestyle sector such as travel, hospitality, health, and halal tourism (Rusydia et al., 2021). The shift of a general lifestyle to a lifestyle that is in accordance with sharia principles has become a rapid progress in the world halal industry (Rahmatika & Suman, 2020).

In supporting the development of the halal industry, integration is needed in order to produce better output, but there are still several problems that are still a challenge to solve in order to achieve the development of an integrated halal industry. This paper examines the priority problems in the development of the integrated halal industry in Indonesia in order to determine the side of improvement that needs to be prioritized based on the opinions of experts for a better progress of the halal industry in Indonesia.

The following are some of the aspect and problem that are still a challenge to solve in order to achieve the development of an integrated halal industry in Indonesia. Each problem variable is determined based on references from previous research as in the following table.

**Table 1:** Aspects of Integrated Halal Industry in Indonesia

Problems	Aspects	Previous Study
Criteria	Regulation & Policies	(Wachama et al., 2018) (Salleh et al., 2014) (N. Othman et al., 2017) (Rabbani et al., 2020) (Nugraheni & Fauziah, 2019)
	Human Resources	(Albattat et al., 2018) (Mohsin et al., 2016) (Giyanti et al., 2020) (Boğan, 2020) (Firmansyah, 2019)
	Institutional Building	(Katuk et al., 2020) (Jeaheng et al., 2020) (Prayag, 2020) (Aniqoh & Hanastiana, 2020) (Haque et al., 2018)
	Service & IT	(Rahman et al., 2020) (Katuk et al., 2020) (Albattat et al., 2018) (R. Othman et al., 2015) (Mohamed et al., 2020)
	Sharia Issues	(Adirestuty, 2019) (Hassan, 2015) (Henderson, 2016b) (Mohsin et al., 2016) (Muthoifin, 2019)
	Public Awareness	(Muflih & Juliana, 2020) (Henderson, 2016b) (Ahmat et al., 2012) (Henderson, 2016a) (Achsien et al., 2016)
Regulation & Policies	Responsiveness	(Naeem et al., 2019) (Rodrigo & Turnbull, 2019) (Adekunle & Filson, 2020)
	Implementation	(Firmansyah, 2019) (Salleh et al., 2014) (N. Othman et al., 2017)
	Synchronisation	(Adekunle & Filson, 2020) (Harrieti et al., 2020)
Human Resources	Knowledge	(Eid, 2013) (Adirestuty, 2019) (Akin & Okumuş, 2020)
	Competencies	(Muhammad et al., 2015) (Hasan & Muslimin, 2019) (Iranmanesh et al., 2018)
	Behaviour	(Mansouri, 2014) (Wibowo et al., 2020) (Sodikin, 2020)
Institutional Building	Institutional Support	(Qomaro, 2019) (Karahalil, 2020) (Hendratmi et al., 2019)
	Synergy Halal Business-IFI	(Fauzi et al., 2018) (Sukesi & Hidayat, 2019) (Mubarok & Imam, 2020)
	Stakeholders Forum	(Magsi et al., 2020) (Putit et al., 2016) (Azmi et al., 2019)
Service & IT	Accessibility	(Rahmatika & Suman, 2020) (Jeaheng et al., 2019) (Ribadu et al., 2020)
	Network	(Sodikin, 2020) (Widiastuti et al., 2020) (Eid & El-Gohary, 2015)
	Digital Transformation	(Miskam et al., 2018) (Rabbani et al., 2020) (Junusi, 2020)
Sharia Issues	Product & Services	(Fajriyati et al., 2020) (Rasul, 2019) (Nugraheni & Fauziah, 2019)
	Competitive Return	(Mansouri, 2014) (Carboni et al., 2014) (Razalli et al., 2013)
	Source of Halal Fund	(Latief, 2013) (Stephenson, 2014) (Hendratmi et al., 2019)
Public Awareness	Education	(Muflih & Juliana, 2020) (Vanany et al., 2019) (Mohsin et al., 2016)
	Trust	(Iranmanesh et al., 2018) (Iranmanesh et al., 2019) (Zailani et al., 2016)
	Socialization	(Malik & Senjiati, 2020) (Mohamed et al., 2020) (Widiastuti et al., 2020)

Furthermore, this research tries to continue the research conducted by Amalia & Hidayah (2020) on the same topic, related to the development strategy of the integrated halal industry in Indonesia. This is important to do, especially in connection with the huge potential of the halal industry globally and Indonesia's participation in it.

## METHODOLOGY

This study aims to find priority problems in the development of the integrated halal industry in

Indonesia. The data used are the results of interviews with academics, practitioners and regulators of the halal industry and Islamic economics in general. The total number of expert respondents is 11 experts. The software application used as a tool is Microsoft Excel. The method used is the Delphi technique which is a qualitative method based on interviews with experts.

The Delphi method is a group process that involves the interaction between the researcher and a group of experts related to a particular topic, and through the help of a questionnaire. This method is

used to find common ground on future trends using a structured information gathering process. This method is useful when the opinions and judgments of experts and practitioners are needed to solve problems.

The Delphi method is widely applied in various fields of research. Gupta & Clarke (1996) examined 463 Delphi related articles and concluded that the 3 most popular areas for Delphi application were education, business and healthcare. Other fields are related to manufacturing, management and IT, social science, real estate, engineering, transportation, the environment, to tourism. So far,

there are several types of Delphi method research, both standard and modified, including Delphi real-time spatial, Delphi group, Delphi market, Delphi real-world to Delphi policy. Based on a lot of literature in indexed and reputable journals, the majority of Delphi application research is conducted in 2 and 3 rounds.

Meanwhile, the majority of participants or Delphi expert respondents were between 11 and 20 respondents. In this research, the number of respondents was 11 experts. The following is a list of respondents in this study.

**Table 2:** List of Respondent

No	Respondent	Institutions	Expertise
1	AS	Bank Indonesia Institute	Islamic Economics
2	ARA	Ex. Dir of Islamic Banks	Islamic Finance
3	AC	STES Islamic Village	Islamic Banking
4	HT	BWI Commissioner	Waqf-Zakat
5	MM	Tazkia Institute	Islamic Accounting
6	NH	DSN-MUI	Muamalah
7	PR	Bank Sharia Mandiri	Islamic Banking
8	RS	Airlangga University	Waqf
9	RI	DEKS Bank Indonesia	Islamic Economics
10	AB	OJK	Islamic Banking
11	AD	Ibn Khaldun University	Halal Marketing

This study will use 3 statistical indicators that are most widely used in the application of the Delphi method, namely the mean (average) value, the standard deviation value, and the interquartile range or IR value. The first measure of convergence assessment is when the answers or ratings of all respondents have a standard deviation value of less than 1.5 (<1.5). The standard deviation notation formula as it is known is as follows.

$$s = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n-1}} \quad \text{or} \quad \sqrt{\frac{\sum x_i^2 - \frac{(\sum x_i)^2}{n}}{n-1}}$$

Where:

$x$  = respondent A's answer to instrument n

$\bar{x}$  = average respondents' answers to the instrument n

The next measure of consensus or convergence assessment is when the answers or assessments of all respondents have an Interquartile Range (interquartile range) or IR value of less than 2.5 (<2.5). The calculation of the IR value is the difference between the upper quartile and lower quartile ( $IR = Q_3 - Q_1$ ), where the quartile value formula is as follows.

$$Q_1 = \frac{x_{\frac{(n-1)}{4}} + x_{\frac{(n+3)}{4}}}{2}$$

$$Q_2 = x_{\frac{2(n+1)}{4}}$$

$$Q_3 = \frac{x_{\frac{3n+1}{4}} + x_{\frac{3n+5}{4}}}{2}$$

The measurement to express the convergence or level of consensus on all variables is when the standard deviation value  $<1.5$  and the value of the interquartile range  $<2.5$ . If one of the indicators does not meet the requirements, then the variable is declared not convergent or not agreed (Divergent). Meanwhile, for variables that have reached the requirements, the next step is to rank with the highest average value for each variable that reaches consensus (convergent).

## RESULT

The halal industry is a new and popular topic of conversation in the business world, both in Indonesia and in other countries, even the value of halal products currently traded is around US \$ 254 billion (Widiastuti et al., 2020). The concept of the halal industry was born from the concept of Islam as a religion which is a blessing for all nature (Rahmatan Lil Alamin), where Islam regulates all aspects of human life, not only about worship, but also all aspects of life.

In its development, several industries covered by the halal industry are: the Islamic

financial industry, the halal food industry, halal tourism, halal pharmaceutical, halal media, and halal cosmetics. To be optimal, all these industries need to be well integrated. There are several problems that are still a challenge to solve in order to achieve the development of an integrated halal industry in Indonesia.

Based on a literature study, there are at least 6 criteria for integrated halal industry problems in Indonesia, namely: (1) Regulation & Policies, (2) Human Resources, (3) Institutional Building, (4) Service & IT, (5) Sharia Issues and (6) Public Awareness. Of the six elements of the integrated halal industry problem in Indonesia above, each problem is divided into sub-criteria. The complete answer in the form of weight given by the 11 expert respondents are attached.

In the Delphi method application, there are 3 statistical indicators that are most widely used, namely the mean (average) value, the standard deviation value, and the interquartile range or IR value. Based on the results of data processing that has been carried out, the calculation of priority problems for the integrated halal industry in Indonesia is as attached in the following table.

**Table 3:** Calculation Results Delphi Problem Integrated Halal Industry

Problems	Variable	Q1	Q2	Q3	IR	Std. Dev.	Evaluation		Mean	Rank
							Std. Dev	IR		
Criteria	Regulation & Policies	7	8	9	2	0.79	Convergent	Convergent	8.05	1
	Human Resources	7	8	8	1	0.99	Convergent	Convergent	7.48	6
	Institutional Building	7	8	8	1	0.75	Convergent	Convergent	7.69	4
	Service & IT	8	8	8	0	0.43	Convergent	Convergent	7.99	2
	Sharia Issues	7	8	8	1	0.86	Convergent	Convergent	7.68	5
	Public Awareness	7	8	9	2	1.03	Convergent	Convergent	7.75	3
Regulation & Policies	Responsiveness	7	7	8	1	1.14	Convergent	Convergent	7.18	3
	Implementation	8	8	9	1	0.90	Convergent	Convergent	8.04	1
	Synchronisation	7	9	9	2	1.08	Convergent	Convergent	8.01	2
Human Resources	Knowledge	6	7	8	2	1.34	Convergent	Convergent	7.05	3
	Competencies	6	8	8	2	1.23	Convergent	Convergent	7.34	2
	Behaviour	7	8	9	2	1.04	Convergent	Convergent	7.93	1
Institutional Building	Institutional Support	7	8	9	2	1.15	Convergent	Convergent	7.54	2
	Synergy Halal Business-IFI	7	9	9	2	1.13	Convergent	Convergent	7.92	1
	Stakeholders Forum	7	7	8	1	1.00	Convergent	Convergent	7.02	3
Service & IT	Accessibility	8	8	9	1	0.75	Convergent	Convergent	8.24	1
	Network	7	8	9	2	1.31	Convergent	Convergent	7.78	2
	Digital Transformation	7	7	9	2	0.99	Convergent	Convergent	7.48	3
Sharia Issues	Product & Services	7	7	9	2	0.98	Convergent	Convergent	7.57	1
	Competitive Return	7	7	8	1	1.96	Divergent	Convergent	6.06	3
	Source of Halal Fund	6	7	8	2	1.21	Convergent	Convergent	6.90	2
Public Awareness	Education	7	7	9	2	1.43	Convergent	Convergent	7.21	3
	Trust	6	8	9	3	1.42	Convergent	Divergent	7.58	2
	Socialization	7	8	9	2	1.21	Convergent	Convergent	7.62	1

Based on table 2 above, in general, of the 24 integrated halal industry problem variables, 22 variables have been agreed upon by experts (convergent) and only 2 variables are not agreed (divergent). The two variables that were not agreed upon regarding the problem of the integrated halal industry in Indonesia were related to competitive returns (in the Sharia Issues sub-criteria) and trust (in the Public Awareness sub-criteria).

Meanwhile, the order of the most important variables in the integrated halal industry problem in Indonesia is: (1) Regulation & Policy, (2) Information Technology & Services, (3) Public Awareness, (4) Institutional Building, (5) Sharia Issues, (6) Human Resources.

As for the most priority issues for each of the sub-criteria are as follows, for the Regulation

and Policy sub-criteria, the main problem is Application. For the Human Resources sub-criteria, the main problem is Behavior. For the sub-criteria for Institutional Buildings, the main problem is the Halal Business Synergy - IFI. For the Information Technology and Services sub-criteria, the main problem is Accessibility. For the sub-criteria for Sharia Issues, the main problem is Products & Services. For the Community Awareness sub-criteria, the main problem is socialization.

**DISCUSSION**

Based on the results of the Delphi research above, the first result of the order of the most important variables in the integrated halal industry problem in Indonesia is Regulation and Policy with an average value of 8.05 and a convergent-

convergent consensus. These regulatory and policy variables are very important considering that the implementation of each halal industry requires an appropriate basis of rules so that they can be implemented without conflict with the norms of sharia (Hasan & Muslimin, 2019). In addition, the existence of regulations can cover the halal industry from a legal standpoint and facilitate more intensive socialization and better integration (Djarmiko, 2019).

The most priority issues in the Regulation and Policy sub-criteria are their application with an average value of 8.04 and convergent-convergent evaluation. The application of regulations and policies needs special attention because this rule has the authority to regulate how the implementation of the integrated halal industry in the field (Ab Rashid & Bojei, 2019). This application also requires supervision from the regulator so that the development of its impact on the halal industry can be found directly (Sodikin, 2020).

Furthermore, in the second order of the most important problems in the integrated halal industry in Indonesia, namely Information Technology and Services with an average value of 7.99 and convergent-convergent evaluation according to experts. The rapid development of technology certainly provides greater opportunities for the halal industry to be exploited, this can be seen from the positive sentiment of the world community about the development of the halal industry on social media (Ainin et al., 2020). In addition, the use of good services and technology for machines and factories will be able to improve the quality of products from the halal industry itself (Wahyuni et al., 2020).

In this Information Technology and Services sub-criteria, the most important problems that need to be resolved are accessibility with an average value of 8.24 and convergent-convergent evaluation. Friendly accessibility for the halal industrial market can certainly provide better service and this is a form of realization of compliance with sharia (Hasan & Muslimin, 2019). So, the higher the accessibility in a halal industry, the potential satisfaction of its users or buyers is

also directly proportional, will be higher (Iranmanesh et al., 2018).

The third place in the priority of integrated halal industry issues is Public Awareness with an average score of 7.75 and convergent-convergent evaluation based on expert opinion. Public awareness is included in the existence of a shadow in people's thinking about what is meant by the halal industry, so that further it can lead to good perceptions and finally produce loyalty to the products of the halal industry (Shafaei, 2017). Public awareness about the halal industry especially in Indonesia tends to be low, so its usefulness is still limited to those who know (Wahyuni et al., 2020).

More specifically, in the Community Awareness sub-criteria, the most important problems are related to socialization with an average score of 7.62 and convergent-convergent evaluation. Proper and strategic socialization is the main key in solving public awareness problems so that the development of the halal industry will be even better (Kasdi, 2018). Socialization to the public needs to be improved in terms of better quality and more frequent quantity so that products from the halal industry can be better known (Sodikin, 2020). The parties that need to do this socialization are of course not only government agencies, but also need support from stakeholders from various halal industries in Indonesia (Widiastuti et al., 2020).

## CONCLUSION

Based on the results of the calculation, in general, of the 24 variable problems with the integrated halal industry in Indonesia, 22 variables have been agreed upon by experts and only 2 variables have not been agreed upon. From the results of calculations using the Delphi method, the following are the priority list of problems in the integrated halal industry in Indonesia and their sub-criteria: (1) Regulation & Policy: Implementation, (2) Services & Information Technology: Accessibility, (3) Public Awareness: Socialization, (4) Institutional Building: Halal Business Synergy - IFI, (5) Sharia Issues: Products and Services, (6) Human Resources: Behavior.

There are several limitations in this integrated halal research. This study only uses a qualitative approach in the form of the Delphi Technique from interviews with halal industry experts in Indonesia. In the future, to make it more robust, it is necessary to conduct research with a better method along with a greater number of respondents and representatives.

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# APPENDIX

**Table 4:** Results of Expert Respondents' Answers

Problems	Variable	Respondents										
		N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
Criteria	Regulation & Policies	9	8	8	8	7	9	9	7	9	7	8
	Human Resources	6	6	9	7	7	9	8	8	8	7	8
	Institutional Building	9	7	8	8	7	9	7	7	8	8	7
	Service & IT	9	8	8	8	7	8	8	8	8	8	8
	Sharia Issues	9	8	6	7	7	8	8	7	9	8	8
	Public Awareness	9	6	9	7	7	9	7	7	9	8	8
Regulation & Policies	Responsiveness	6	8	7	7	5	9	9	7	8	7	7
	Implementation	8	7	9	8	9	9	9	8	8	6	8
	Synchronisation	9	9	7	9	7	9	9	7	9	6	8
Human Resources	Knowledge	8	5	9	7	5	9	7	8	8	6	7
	Competencies	5	6	9	8	7	9	8	8	8	6	8
	Behaviour	9	8	9	7	9	9	9	8	7	6	7
Institutional Building	Institutional Support	9	8	7	7	5	9	7	7	9	8	8
	Synergy Halal Business-IFI	9	7	9	9	9	9	7	6	9	7	7
	Stakeholders Forum	5	6	7	7	7	9	7	7	8	7	8
Service & IT	Accessibility	9	8	9	9	7	9	8	8	9	7	8
	Network	9	9	8	9	5	9	8	7	9	6	8
	Digital Transformation	9	7	8	7	9	7	7	9	6	7	7
Sharia Issues	Product & Services	9	6	7	7	9	9	8	7	8	7	7
	Competitive Return	1	9	6	7	7	7	7	8	7	7	8
	Source of Halal Fund	7	9	6	7	5	6	8	7	9	6	7
Public Awareness	Education	9	5	9	5	7	9	7	7	9	7	7
	Trust	9	6	9	9	5	9	7	8	9	6	8
	Socialization	9	5	9	7	9	9	7	7	8	7	8