Importance-Performance Analysis as a Tool in Evaluating Halal Assurance System Implementation

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Abstract Current Indonesian market demands halal status for all products marketed in Indonesia. This requirement is increasing by the establishment of law No.33 year 2014 on halal product assurance. Halal status apply both in finished products and its ingredients. LPPOM MUI or Assessment Institute for Food, Drugs, and Cosmetic, The Indonesian Council of Ulama (AIFDC –ICU) is an Indonesian organization to conduct halal certification process. To obtain halal certificate, company have to implement eleven criteria of halal assurance system. The purpose of this study is to evaluate how the implementation is going and which criteria have the highest priority for improvement using Important Performance Analysis (IPA). The results reveal that the priority of improvement are management review and product. Involvement of top management and new procedure to filter product description are some alternative for improvement.

Keywords Assurance system, Halal product, Importance performance analysis

1. Introduction

Market competition nowadays is keep escalating, the best way to face this challenge is increasing product competitiveness. Competitive advantage can be found in product design, quality, price, stock availability, delivery time, and after sales service. This concept apply for domestic and foreign market competition [1]. Current trend in Indonesian market is the requirement of halal status, as the establishment of law No.33 year 2014 on halal product assurance. Halal product assurance is a legal certainty to halal product status and proven through halal certificates. This apply for all products marketed in Indonesia. Assessment Institute for Food, Drugs, and Cosmetic, The Indonesian Council of Ulama (AIFDC –ICU) is responsible in conducting halal certification process. The world population of Muslim in 2012 is around 1.6 – 1.8 billion. Indonesia is country with biggest Muslim population in the world. In 2004, around 200 million people or nearly 88% of the population were practicing Muslim [2].

Halal in Arabic means permissible, in holy Quran it is a dietary obligation for muslim [3]. Halal food is clean and free from prohibited ingredients or Haram [2]. Halal and haram are part of standard legal system of Islam which known as Shariah, a system with primary objective for the good of mankind [4]. From this explanation can be concluded if nowadays halal is a life style.

Both finished product and ingredients require halal status that lead all manufacturer to certify their product, includes flavors and fragrances industry. In June 2017, MUI stated that almost 90% of the flavors and fragrances in Indonesia were certified byAIFDC – ICU. Before starting halal certification process for products and ingredients, company need to implement halal assurance system in their facility. Halal assurance system is an integrated management system which developed and implemented to manage materials, production processes, products, human resources, and procedures to maintain the halal production process according to AIFDC – ICU requirements. Halal assurance system consist of eleven criteria as follows (1) halal policy (2) halal management team (3) training and education (4) material (5) product (6) production facility (7) written procedures for critical activities (8) traceability (9) procedure for handling product that not meet the criteria (10) internal audit (11)

management review. AIFDC acts as an auditor and scientist who review the content of product from scientific and technological side, also witnessing overall production process and halal assurance system implementation within the company. ICU acts as ulama in fatwa commission to state decision on product status. Fatwa statement describe halal status of products based on audit results [5].

Importance Performance Analysis was conducted to evaluate halal assurance system implementation and define which criteria with highest priority for improvement. IPA was firstly revealed by Martilla and James in 1977 in an Importance Performance Analysis journal published by the Marketing journal. With IPA respondents is expected to provide an assessment of the performance and importance of the company. The results of the analysis are provided in the importance performance matrix, where the x axis represents the performance level and the y axis represents the importance level [6]. Importance Performance Analysis is a helpful tool to map the status of indicator to lead management decide strategic actions [7].

This method is generally accepted as easy tool to develop effective strategies, because it facilitate an interpretation of data which useful for define strategic decisions [8].Two dimensional grid of IPA is divided into four quadrant: (1) concentrate here; (2) keep up the good work; (3) low priority; (4) possible overkill [9].Quadrant I contains criteria with high importance, unfortunately the performance does not meet the requirements. The criteria in this quadrant must improve immediately. Quadrant II contains several criteria with relatively high importance and relatively high performance. Items in this quadrant are considered as additional criteria to improve the criteria compliance. Quadrant III, criteria in this quadrant come with relatively low level of importance and low performance. All criteria here provide little effect in final compliance. Quadrant IV is area which contains some relatively low importance level criteria, but the performance levels are high. All efforts in quadrant IV can be decreased to minimize the costs [10]. IPA shows the relationship between the importance level of an indicator and the satisfaction level of performance. In IPA, first step is to calculate the average score of importance and performance level of each criterion. It is using this following equation [7].

$$\overline{Xi} = \frac{\sum_{i=1}^{k} Xi}{n}$$

$$\overline{Yi} = \frac{\sum_{i=1}^{k} Yi}{n}$$

The relationship consists of three items. They are average score of the i item satisfaction level (Xi), then the average score of the i item importance level (Yi), and the number of respondents (n) [7].
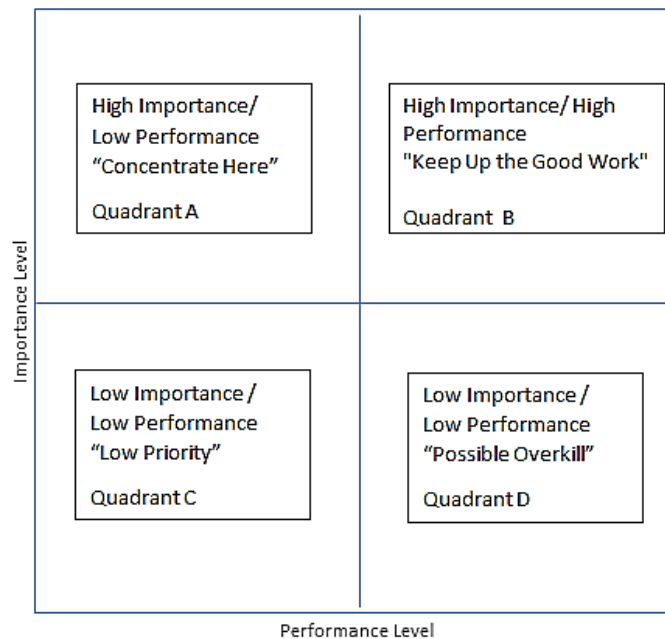
Importance Performance Matrix

Figure 1: Importance Performance Matrix (Martilla & James, 1977)

2. Material and Methods

Fifteen members of halal management team is requested to give assessment to the implementation of eleven HAS criteria in flavor and fragrance industry. Using 1 to 5 Likert Scale, respondent assess the performance level and importance level of halal assurance system implementation in the company. The scale covers importance level from strongly unimportant (1) to strongly important (5), and it is strongly dissatisfied (1) to strongly satisfied (5) for performance level. Likert scale originally introduced to measure attitude in a scientifically accepted and validated way. An attitude can be determined as preferential ways of behaving and reacting when specific circumstance is around. Likert scale is a set of statements provided for a situation and respondents are asked to show their agreement level [11].

Respondents who fill the questionnaire come from different department which are critical to product status. The department are purchasing, incoming warehouse, research and development, quality control, production, finished goods warehouse, and transportation.

To ensure the questionnaire is valid and reliable, validity and reliability test are conducted as statistical procedure using SPSS. The criteria of Halal Assurance System are provided in Table 1 according to HAS 23101, Guidelines for Fulfillment of Criteria for Halal Assurance System in Processing Industry.

Table 1: Halal Assurance System Criteria

No	Criteria	Criteria's Information	Reference
1	Halal Policy	Top management establish written halal policy and disseminate it to all stakeholders	HAS 23101
2	Halal Management Team	Halal management team from all parties involved in critical activities and duty clearly defined by top management	HAS 23101
3	Training and Education	Company has written procedure for training, and conducted at least once per year or more as required. The procedure should provide graduation criteria to ensure personnel competency.	HAS 23101
4	Materials	Materials must not be derived from pork and its derivatives, alcoholic beverages, or alcoholic beverage that physically separated, blood, carrion, and human body parts.	HAS 23101
5	Products	Product's name must not imitate haram things and inappropriate practices according to Islamic law.	HAS 23101
6	Production Facilities	Production line and supporting equipments free from pork and its derivatives.	HAS 23101
7	Written Procedure for Critical Activities	Company have written procedures regarding the implementation of critical activities (new material homologation, material purchasing, production, reformulation, etc)	HAS 23101
8	Traceability	Company have written procedure to ensure the product are manufactured using approved material and produced in facility which fulfil halal criteria	HAS 23101
9	Handling of Non-Conformance Products	Company have written procedure to handle the product which are not complying to halal criteria	HAS 23101
10	Internal Audit	Company have written procedure for internal audit, and the result delivered to LPPOM MUI	HAS 23101
11	Management Review	Top management review the effectiveness of Halal Assurance System	HAS 23101

3. Result and Discussion

Validity and reliability test are conducted to ensure the research instrument is valid and reliable. Table 2 provides the validity test result for halal assurance system criteria.

Table 2: Validity Test of Halal Assurance System

Criteria	Coefficient	r Table	Remarks
C1	0.849	0.514	Valid
C2	0.635	0.514	Valid
C3	0.827	0.514	Valid
C4	0.701	0.514	Valid
C5	0.827	0.514	Valid
C6	0.701	0.514	Valid
C7	0.799	0.514	Valid
C8	0.772	0.514	Valid
C9	0.779	0.514	Valid
C10	0.849	0.514	Valid
C11	0.635	0.514	Valid

(source : Data processed, 2018)

Table 2 shows that ther is no criteria with validity coefficient value below 0.514 (r table). It means that 11 criteria in the questionnaire are valid. From reliability test conducted, alpha value of reliability coefficient is 0.928. It can be concluded that the questionnaire is reliable.

Table 3: Mean Importance and Performance of Halal Assurance System Criteria

Criteria	Coefficient	Performance $\bar{x}$	Importance $\bar{y}$
C1	Halal Policy	4.40	4.54
C2	Halal Management Team	4.20	4.73
C3	Training and Education	4.13	4.73
C4	Materials	4.27	4.87
C5	Products	4.13	4.80
C6	Production Facilities	4.27	4.73
C7	Written Procedure for Critical Activities	4.27	4.80
C8	Traceability	4.33	4.80
C9	Handling of Non-Conformance Products	4.27	4.87
C10	Internal Audit	4.40	4.87
C11	Management Review	4.20	4.87

(source : Data processed, 2018)

Table 3 shows mean importance and performance of implementation halal assurance system criteria. This data is results from questionnaire data processing.
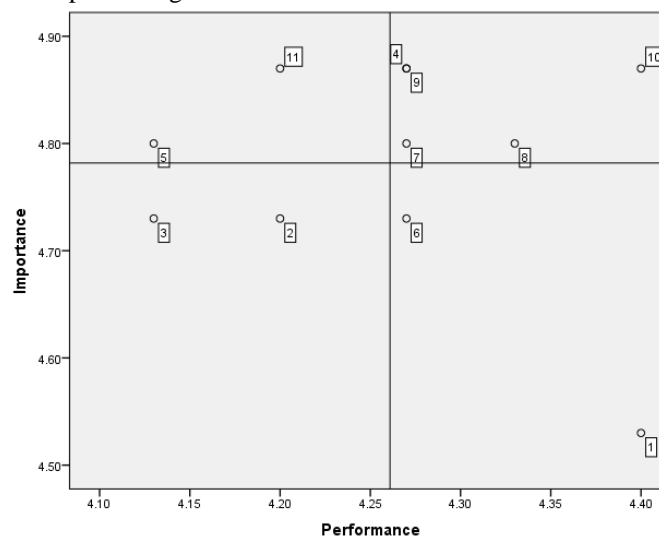

Figure 2: Cartesian Diagram of Halal Assurance System Criteria
(Source: Data processed, 2018)

From figure 2, can be interpreted as follows:

(1) Quadrant A where the importance level are high but the performance are low. In this quadrant there are two criteria which need to concentrated more: (a) product and (b) management review. In product criteria, product's name must not imitate haram things and inappropriate practices according to Islamic law [5]. Set up new procedure to filter all product name before starting halal registration process is one of option for product criteria improvements. While in management review criteria, top management should take more part in halal assurance system implementation by supervise the process through regular management review. This management review is to evaluate the effectiveness of halal assurance system implementation and propose some action to improve the performance [5].

(2) Quadrant B, here five criteria which have to be maintained in good performance. In this quadrant both performance and importance level are high. The criteria are (a) materials (b) written procedure for critical activities (c) traceability (d) handling of non-conformance products (e) audit internal.

(3) Quadrant C, in this quadrant both performance level and importance level are low. This criterion can be labelled as low priority criteria. There are two criteria (a) halal management team, and (b) training and education

(4) Quadrant D, there are two criteria that the importance level are low but the performance level are high. This can be labelled as over used of resources. Company can allocated the resources to other criteria which need to be concentrated more. The criteria are (a) halal policy and (b) production facility.

4. Conclusion

From the study can be concluded that company is ready for halal registration. Implementation of halal assurance system need to be concentrated more in product criteria and management review criteria. Company should take more parts in halal implementation with regularly conduct management review to supervise and review how the process is going. For the product criteria, halal management team must improve the procedure to ensure that all product certified are using appropriate name and strictly following the criteria. Beside those improvements, some efforts in halal policy criteria and production facilities criteria can be reduced and later allocated to product and management review criteria.

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