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Research Article

The Influence of Logistics Performance on Company Performance in the Small and Medium Industry

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Abstract

A company's performance plays a vital role in business growth. Many studies on a company's performance have been established that involve various variables as antecedents. Among others is logistics performance. This research aims to test and analyze the impact of logistics performance on a company's performance by involving exogenous variables in efficiency, effectiveness, logistics differentiation, and halal certification. The fundamental theory of company performance applied in this research is the resource-based theory, a critical component that adopts a resource-based view. The study involved 125 business units in the halal-certified beverage industries located in two provinces in Indonesia. The questionnaire was applied as the data collection method, while Structural Equation Modeling was employed as data analysis with parameter estimation referred to as maximum likelihood. The novelty of this research is in the introduction and empirical testing of the halal certification variable, in addition to the variables of logistics efficiency, effectiveness, and differentiation. These variables can potentially impact a company's success through its logistics performance. The hypothesis test result revealed that logistics efficiency negatively influences logistics performance. On the contrary, effectivity, differentiation, and halal certification positively and significantly influence logistics performance. Similarly, logistics performance substantially impacts a company's performance. The findings suggest that to enhance the company's performance, the individual responsible for logistics should comprehensively understand logistics performance and performance in other areas. The process could be carried out by increasing efficiency, implementing differentiation strategies, and implementing halal certification.

Keywords: Halal certification, Logistics efficiency, Logistics effectiveness, Logistics differentiation, Beverage industry.

1. Introduction

A competitive business environment produces fiercer competitiveness and strongly affects a company's performance (Al-Rfou, 2012). A company's performance reflects the conformity of business targets or level of achievement with the actual achievement by the end of the business period (Yıldız et al., 2014). A company's performance indicates how well the organization achieves its objectives (Boachie-Mensah & Issau, 2015). The company's performance could become the guideline for operating an efficient business in terms of business superiority and sustainability (Na-Nan, 2016). Performance measurement is essential for companies since it helps them identify activities' success or failure levels (Trkman & McCormack, 2009). Many studies on a company's performance have been accomplished by including various antecedent variables, including logistics performance (Fugate et al., 2010), (Schramm-Klein & Morschett, 2006). There are many criteria for logistics performance, yet they could be categorized into efficiency, effectiveness, and differentiation. Cumulative evidence from previous research demonstrates that logistics performance is multi-dimensional and defined as the level of efficiency, effectiveness, and differentiation highly related to the achievement of logistics (Smith, 2000); (Bobbit, 2004), Fugate et al. (2010). The results of the above three studies show a positive correlation between efficiency, effectiveness, and differentiation toward logistics performance.

In the subsequent development, other literature states that implementing appropriate resources, such as halal certification, could positively influence the logistics performance of Ab Talib et al. (2016). Ab Talib et al. (2017) empirically proved this statement, which specified that halal food certification positively correlates with operational performance, with logistics and distribution as two exogenous variables. Masudin et al. also empirically support this statement (2020a). Masudin et al. (2020b) suggested that service quality from halal suppliers positively and significantly influences halal logistics performance.

The discussion on halal certification becomes essential since it provides more benefits. Halal certification and

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awareness positively influence customers' decisions (Setyaningsih & Marwansyah, 2019). In correlation with buying and willingness to pay, halal certification has a primary role in purchasing intention determination (Farhat et al., 2019), and it is highly related to the desire to spend (Khan et al., 2019). Regarding customer satisfaction, halal certification is essential for customers who want to consume halal products (Khan et al., 2019); this certification is vital in fulfilling higher customer satisfaction (Haleem et al., 2019).

As for the relationship with performance, halal certification could be employed as a product differentiation technique to increase income and selling power to halal customers (Zainuddin et al., 2019). This halal certification positively affects innovative performance, directly impacting market performance (Salindal, 2019). Besides, the version of MSMEs equipped with halal certification is better than those without (Giyanti & Indriastiningsih, 2019). According to Ab Talib et al. (2016), empirical research about halal certification, along with its impacts on logistics performance, still needs to be improved, leaving a gap for further potential future studies. Recently, studies indicated that companies are ready to adopt a halal system to penetrate the logistics operation (Ngah et al., 2014).

This research aims to test and analyze the impact of logistics performance on a company's performance by involving exogenous variables in efficiency, effectiveness, logistics differentiation, and halal certification.

2. Literature Review

Logistics performance by company's performance: Previous research has discovered a positive relationship between logistics performance and company performance (Fugate et al., 2010), (Lambert & Burduroglu, 2000), (Schramm-Klein & Morschett, 2006), yet other studies have stated the opposite, revealing the absence of a direct correlation between logistics performance and company performance (Green et al., 2008) (Lynch et al., 2000). The Research gap should be settled. The research that covers the influence of logistics efficiency, logistics effectiveness, and logistics differentiation towards a company's performance through logistics performance has been carried out by Smith (2000), Bobbit (2004), and Fugate et al. (2010). However, no research has been found that studies the influence of logistics efficiency, logistics effectiveness, logistics differentiation, and halal certification on a company's performance through logistics performance. Therefore, it becomes necessary to showcase and test the correlation of halal certification as a new variable towards a company's performance through logistics performance, aside from logistics efficiency, effectiveness, and differentiation.

Based on the correlation model between halal certification and logistics performance developed by Ab Talib et al. (2016), this research will fill the theoretical gap by including halal certification as a new variable in the logistics performance model established by Fugate et al. (2010) focuses on logistics efficiency, effectiveness, and differentiation logistics. Besides the theoretical research gap, the conceptual research gap will be fulfilled based on the study that suggests future research should concentrate more on quantitative research design by examining the hypothesis relationship and encouraging the implementation of the conceptual model in actual situations for better results (Ab Talib et al., 2016). The conceptual research gap will explore the correlation between halal certification and logistics performance. Besides, there is an empirical research gap that will be filled by this study based on the previous research, which attempts to find generalization in several manufacturing industries and suggests future research to implement other approaches to be more focused on a single sector (Fugate et al., 2010). Therefore, to respond to the empirical research gap, this research will test the relationship by employing a similar sector and focusing on the beverage industry to maintain consistency.

Then, the novelty of this research is to present and empirically test the halal certification variable; aside from the variable of logistics efficiency, logistics effectiveness and differentiation can influence the company's performance through logistics performance. The addition of this variable specifies the importance of halal certification implementation as the mechanism for enhancing the company's performance through logistics performance.

3. Materials and Methods

3.1. Research model

The research model, as illustrated in Figure 1, combines the logistics performance model of Fugate et al. (2010), who developed the model of halal certification, and the logistics performance relationship (Ab Talib et al., 2016).

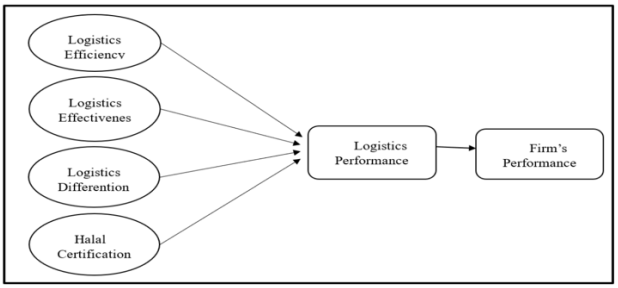

Fig. 1. Research model. Source: (Qurtubi, 2021) Qurtubi et al. (2023).

3.2 Research hypothesis

Based on previous research, hypotheses are formulated as follows:

H_1:Efficiency has a positive influence on logistics performance

H_2:Effectiveness has a positive influence on logistics performance

H_3:Differentiation has a positive influence on logistics performance

H_4:Halal certification has a positive influence on logistics performance

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H_5:Logistics performance has a positive influence on the company's performance

3.3 Type and method of research

Explanatory research is designed to test the relationship among hypothesized variables or to explain the correlation between two or more symptoms or variables. The survey method is used as the research method, namely by collecting respondents' answers from the results of distributing questionnaires. The questionnaire was tested first on several research respondents to test the validity and reliability of the questions in the questionnaire.

3.4 Population and research sample

The population in this research is a business unit in the beverage industry located in the Special Region of Yogyakarta and Central Java Province, Indonesia. The analysis unit in this research is the business unit, represented by a unit head or person in charge of logistics who plays as respondent. By considering the population's characteristics and size, the sampling technique utilized in this research is non-probability sampling. The samples were taken using purposive sampling and quota sampling methods.

3.5 Variable and research indicator

Table 1 displays the variable and the research indicator.

Table 1.
Variable and research indicator

Variables and operational definition	Indicators	Indicator source
Logistics Efficiency; a measure of how well the resources expended are used (Fugate et al., 2010)	The value that represents the logistics performance of a business unit: 1. The order is delivered to customers from the main location that is appointed to serve the customers 2. Line item fill rate (Order items the picking operation actually found) 3. Orders shipped on time. 4. Shipments requiring expediting. 5. Inventory turns per year. 6. Average order cycle time (time in days between order receipt and order delivery).	(Bobbit, 2004); (Fugate et al., 2010); with modification of answers and scales.
Logistics Effectiveness; ability to achieve predetermined goals (Langley & Holcomb, 1992)	Actual performance compared to planned performance: 1. Sales (IDR) 2. Transportation costs 3. Warehousing costs 4. Inventory costs 5. Total logistics costs	Bobbit (2004); Fugate et al. (2010); with modification of scales.
Logistics Differentiation; a key element of logistics performance due to the value customers receive from logistics activities (Langley & Holcomb, 1992)	Compared to competitors: 1. Damage free deliveries 2. Finished goods inventory turns 3. Forecasting accuracy 4. Line item fill rate 5. Time between order receipt and delivery 6. Time on backorder 6. Total inventory turns 7. On-time delivery	Bobbit (2004); Fugate et al. (2010); with modification of scales.
Halal Certification; refers to the examination of the food process, starting from preparation, slaughter, ingredients used, cleaning, handling and processing to transportation and distribution (Latif et al., 2014)	Based on the condition in each business unit: 1. Stronger costumers trust 2. Intacted quality and integrity of the halal product 3. Timely distribution of halal product 4. The customers depend on timely distribution, and halal logistics serve this type of service since the operation is prevented from inducing difficulties and obstructions. 5. The financial impact that promises a bigger revenue than the operational cost in halal logistics. 6. Certification, distribution and handling cost can be transferred to customers 7. The distribution of halal products is seamless, as halal certification is a mark of assurance 8. Enable the cross-border distributioan since certification facilitates market expansion.	Ab Talib et al. (2016)
Logistics Performance; The level of efficiency, effectiveness and differentiation related to the achievement of logistics activities (Fugate et al., 2010)	Based on logistics performance of a company: 1. Overall logistics performance is well above the industry average. 2. In general, our logistics performance is excellent. 3. Outstanding at performing our logistics activities.	(Fugate et al., 2010); with modification of scales.
Company Performance; A measurement of how well an organization or entity achieves its goals (Boachie-Mensah & Issau, 2015)	Compared to main competitors: 1. Overall performance 2. The growth of market share in the main market 3. Sales growth 4. Sales percentage resulted from a new product 5. Return on sales 6. Return on assets 7. Return on invenstment	Lynch et al. (2000); Tracey (1998); Baker and Sinkula (1999); Matsuno et al. (2000); Fugate et al. (2010); with modification of scales.

3.6 Scale of measurement for research variable

Research variable measurement employs a six-point Likert scale under two considerations. First, even scales that balance two sides of options. Secondly, the Indonesian culture commonly prefers to select the saver answer and tends to choose the central position within a value (central tendency).

3.7 Data type and source

Two types of data utilized in this research are primary and secondary. Preliminary data are obtained directly from the

business unit as research samples represented by the head of management or the person in charge of logistics. Secondary data support data collected indirectly through statements or literature reviews related to the current research.

3.8 The method of data collection

The questionnaire is used as the data collection method and distributed to the research sample, in this case, the business unit represented by the head of the company or person in charge of logistics as respondents. The questionnaire is designed with open-ended or close-ended questions, which include an assessment of logistics efficiency, logistics effectiveness, logistics differentiation, halal certification, logistics performance, company performance, and company profile.
Researchers directly visited respondents and guided them in filling out the questionnaire. If the respondent does not understand the statement items in the proposed questionnaire, the researcher explains the questionnaire items in question. After the respondents had finished filling out the questionnaire, the researcher withdrew the questionnaire for further processing through the data tabulation stage.

3.9 Instrument test

The validity test employs Product Moment Person Correlation. The questionnaire passed the trial is to be considered reliable as a data collection tool. The results of the instrument validity test on 30 respondents showed that the calculated r for each question item was > r table 0.361, so the question item was declared valid. The results of the comparison of the Sig. (2-tailed) value with a probability of 0.05 shows that the Sig. (2-tailed) value is 0.000 < 0.05, and the Pearson Correlation is positive, so the question item is declared valid. The results of the instrument reliability test show Cronbach's Alpha > 0.60 and Cronbach's Alpha value > 0.361 (r table), so the statement items are declared reliable.

3.10 Data analysis method

Analysis technique that is suitable for this research is inferential and descriptive analysis. Inferential analysis uses Structural Equation Modeling (SEM) with the help of SPSS-AMOS 24 software. A descriptive study is utilized with the support of SPPS Statistics 25.

4. Results and Discussion

4.1. The result of measurement model analysis
A unidimensional test on each construct is performed after a series of confirmatory factor analyses (CFA) covering data normality, outliner evaluation, validity, and reliability tests. After removing four indicators, the result of the CFA test on the exogenous construct is illustrated in Table 1. All indicators show a loading factor value above 0.5, meaning they have fulfilled the convergent validity.

Table 1
The result of the CFA test among exogenous constructs. Source: (Qurtubi, 2021)

Parameter	Value	Result	Evaluation
P	> 0.05	0.053	Fit
RMSEA	0.03-0.08	0.077	Fit
GFI	≥ 0.90 < 1	0.905	Fit
TLI	≥ 0.90 < 1	0.913	Fit
CFI	≥ 0.90 < 1	0.902	Fit
CMINDF	≤ 2.0	1.668	Fit

The result of the CFA test among endogenous constructs, after eliminating two indicators of the company's performance, is illustrated in Table 2. All loading factor values are considered significant since they are above 0.50.

Table 2
The result of the CFA test among endogenous constructs. Source: (Qurtubi, 2021)

Parameter	Value	Result	Evaluation
P	> 0.05	0.71	Fit
RMSEA	0.03-0.08	0.067	Fit
GFI	≥ 0.90 < 1	0.912	Fit
TLI	≥ 0.90 < 1	0.945	Fit
CFI	≥ 0.90 < 1	0.965	Fit
CMINDF	≤ 2.0	1.762	Fit

4.2. The estimation result of the structural equation

After executing the stage of confirmatory analysis, the estimation of the structural equation is performed by only including the indicators that have been tested with CFA. The result of the structural equation is shown in Table 3.

Table 3
The result of the structural equation. Source: (Qurtubi, 2021)

Parameter	Value	Result	Evaluation
P	> 0.05	0.053	Fit
RMSEA	0.03-0.08	0.076	Fit
GFI	≥ 0.90 < 1	0.986	Fit
TLI	≥ 0.90 < 1	0.953	Fit
CFI	≥ 0.90 < 1	0.996	Fit
CMINDF	≤ 2.0	1.478	Fit
ECVI	Smaller than independent model	8.412	Fit

4.3. The result of hypothesis test

After determining the structural equation model, the researchers test the developed hypothesis in this research model. The outline of the test on structural model hypotheses is demonstrated in Table 4.

Table 4
The result of the hypothesis test on the structural model. Source: (Qurtubi, 2021)

Path	Estimate	S.E.	C.R.	P	Description
Efficiency on Logistics	-.106	.169	2.626	.542	Negative

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Performance					
Effectiveness on Logistics Performance	.251	.370	3.063	***	Positive and significant
Differentiation on Logistics Performance	.166	.230	3.719	***	Positive and significant
Halal Certification on Logistics Performance	.543	.125	4.337	***	Positive and significant
Logistics Performance on Company's Performance	.772	.103	7.507	***	Positive and significant

4.4. Discussion

4.4.1. The influence of efficiency on logistics performance

Based on the result of a hypothesis test, it can later be concluded that efficiency negatively influences logistics performance, as shown by p = 0.542 or > 0.05. It can be assumed that hypothesis 1 1 (H_1) is rejected, which means that higher implementation of efficiency will lead to a decrease in logistics performance. This condition could be explained by considering the indicators of efficiency, which are (1) the order is sent to the customer from the central location appointed to serve the customers, (2) line item fill rate or percentage of order item is found in the process of pick up, (3) supply cycle per year, and (4) cycle time of average order or period between order acceptance and order delivery; to meet good efficiency, it takes high efforts and cost. High efficiency could lead to an increase in efficiency cost that is disproportionate to the result of logistics performance.

From the perspective of product characteristics, it is included in functional products with specific features, as follows (Fisher, 1997): (1) long life-cycle, (2) high volume, (3) order forecasting, which is relatively easy with high accuracy, (4) stockout rate that reaches only 1-2%. The strategy of functional products focused on the efforts to minimize physical costs. The ability to operate efficiently is the effort to meet customer's aspirations regarding low prices. Once a business unit tries to reach logistics efficiency through four high-cost indicators, those indicators are not a priority to customers; hence, they are not considered to fulfill customers' aspirations. For example, the order is sent to customers not from the central location, which is appointed to serve the customers. If a delay occurs, the customer can easily find the substitute product. If the inventory cycle goes short, it is also unconsidered a problem for the customer due to the characteristics of functional products, which are durable/long-lasting; likewise, the fulfillment of line item fill rate and extended period of average order cycle that unfulfilled the customer's aspiration, which is low price.

Therefore, logistics efficiency negatively influences logistics performance since managing efforts for proper efficiency takes a high cost. However, this logistics performance provides no added value when the characteristics of functional products are considered. Increased costs will decrease logistics performance. This argument is aligned with Juntunen's statement (2014) that differences in efficiency and logistics performance could happen in particular conditions.

Other possibilities, by considering the composition of the head of the company and person in charge of logistics, who represent business units as respondents, mainly originated from the small-category industry with 72% and the medium sector with only 28%. The respondents could assume that efficiency and effectiveness are mutually exclusive, as suggested by Griffis et al. (2004); hence, most probably, they would state that perspective and assumption are affirmed by most respondents and influence the questionnaire's answer. Mentzer and Konrad (1991) emphasized the importance of operational efficiency and effectiveness by considering the efficiency obtained. The chasing of these two characteristics is mainly considered mutually exclusive, which chases one another in an extreme direction, blocking another chasing. According to Griffis et al. (2004), the logistics manager is traditionally assumed to confront difficult choices and try to be efficient or effective.

4.4.2. The influence of effectiveness on logistics performance

Based on the hypothesis test result, effectiveness positively and significantly influences logistics performance, as shown by p = 0.000 or < 0.05. Hence, the hypothesis 2 (H_2) is accepted. This means that the higher the implementation of logistics effectiveness, the higher the logistics performance will be. The result of this research is aligned with the study conducted by Smith (2000), Bobbit (2004), and Fugate et al. (2010). This similarity demonstrates that the level of business unit effectiveness can empower the existing resources and run its logistics activities effectively, enhancing logistics performance. The assessment of logistics effectiveness is related to actual implementation and planned performance. Therefore, this finding highlights the importance of the ability to achieve pre-determined goals, such as selling, transportation cost, warehousing cost, inventory cost, and logistics costs overall. This research also ratifies the appropriateness and relevancy of resource-based theory utilization in a study by Bobbit (2004).

4.4.3. The Influence of differentiation on logistics performance

Based on the result of a hypothesis test, it could be revealed that differentiation has a positive and significant influence on logistics performance, as shown by the value of p = 0.000 or < 0.05. Hence, the hypothesis 3 (H_3) is accepted. This means that the higher the implementation of logistics differentiation, the higher the logistics performance will be. The result of this research is aligned with the study conducted by Smith (2000), Bobbit (2004),

and Fugate et al. (2010). This similarity demonstrates that the level of business unit logistics differentiation can empower the existing resources and run its logistics activities differently from the competitors, so the result could showcase the importance of understanding logistics activities if compared to competitors. Thus, it is essential for the head of the company or person in charge of logistics to compare its logistics activities with others and to monitor the results of other companies' logistics activities. This research also ratifies the appropriateness and relevancy of resource-based theory utilization in a study by Bobbit (2004).

4.4.4. The influence of halal certification on logistics performance

Based on the result of a hypothesis test, it could be revealed that halal certification has a positive and significant influence on logistics performance, as shown by the value of p = 0.000 or < 0.05. Hence, the hypothesis 4 (H_4) is accepted. It means that the higher the implementation of halal certification, the higher the logistics performance will be. Halal certification is a tangible resource (certification, logo, and process guideline) and an intangible aid (image and reputation) that could become a source of logistics performance in the beverage industry. This research aligned and empirically validated the study conducted by Ab Talib et al. (2016), which suggested the relationship between halal certification and logistics performance using a resource-based view as a theoretical framework. It stated that implementing correct resources, such as halal certification, could influence logistics performance positively. This research is in line with the study performed by Ab Talib et al. (2017), who stated that food halal certification positively correlates with operational performance. One of the exogenous constructs of the research is logistics and distribution, in addition to human resources, infrastructure and tools, production process, and marketing function. This research also ratifies the appropriateness and relevancy of the RBV concept in the study of certification carried out by Ab Talib et al. (2016) and Ab Talib et al. (2017).

Besides, this research is aligned with the study performed by Masudin (2020a); Masudin (2020b) stated that two main dimensions of the variable of service quality for halal suppliers have a positive and significant influence on halal logistics performance, the dimensions that correlated with halal certification are the availability of information system and halal logo indicator, as well as the halal certification that stamped to the product. In this research, related indicators refer to the first and the seventh indicators, respectively, which are the customer trust that strengthens with halal certification. This indicates that logistics operation has been conveyed under the Sharia principles and the smooth distribution of halal products since the certificate is considered assurance. This similarity of the results demonstrates that with halal certification, the business unit can empower the existing resources and run its logistics activities properly, enhancing logistics performance.

4.4.5. The influence of Logistics performance on the Company's performance

Based on the result of a hypothesis test, it could be revealed that halal certification has a positive and significant influence on logistics performance, shown by the value of p = 0.000 or < 0.05. Hence, the hypothesis 5 (H_5) is accepted. It means that higher logistics performance could boost the company's performance. It is explained that logistics performance could mediate the logistics effectiveness, differentiation, and halal certification with the company's performance. In other words, the improvement could be achieved by enhancing logistics effectiveness, differentiation, and halal certification through logistics performance. This research provides empirical support to the results of Fugate et al. (2010), who concluded that logistics performance manages the positive correlation towards organizational performance. Fugate et al.'s research consistently correlates logistics performance with a company's performance. Fugate et al. (2010) tried to seek generalization in several manufacturing industries with this research, which attempts to test the relationship by employing the same sector focused on the beverage industry.

The result of this research is aligned with the study conducted by Lambert and Burduroglu (2000), which revealed a positive correlation between logistics performance and organizational performance in the manufacturing sector. So, the research field (Schramm-Klein & Morschett, 2006) explained that logistics performance positively influences a company's overall performance. This similarity suggests that business unit logistics performance can empower the existing resources and run its logistics activities properly, which enhances the company's performance. The results contradict the research by Lynch et al. (2000), who stated that logistics capability is positively related to a company's performance. This research also conflicts with Green et al.'s research, which specified the absence of a direct relationship between logistics performance and financial performance.

5. Conclusions

From the result of the research, the conclusion could be withdrawn. First, efficiency negatively influences logistics performance, meaning high-efficiency implementation could decrease logistics performance. Secondly, effectiveness has a positive and significant impact on logistics performance, which means implementing better effectiveness will increase logistics performance. Thirdly, differentiation has a positive and considerable influence on logistics performance, which means that better differentiation implementation will lead to higher logistics performance. Fourth, halal certification has a positive and significant effect on logistics performance; halal certificates as tangible and intangible

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resources could be the source of logistics performance. Fifth, logistics performance positively and significantly impacts the company's performance. Logistics performance could mediate the influence of effectiveness, differentiation, and halal certification on a company's performance.

This research provides managerial implications for the head of management and the person in charge of logistics for the beverage industry in its objective to improve the company's performance. The findings explain that to strengthen the company's performance, the head or person in charge of logistics should understand the improvement of logistics performance, besides other fields' performance. It could be conducted by escalating effectiveness, differentiation, and halal certification implementation.

The weakness of this research is that the sample size is only the minimum sample requirement from the population. The limitation of this research is that the proportion of samples for each beverage industry category cannot be determined, so the samples accommodated are primarily in the small industry category, namely 72%. This is not able to provide a general picture to represent the beverage industry, considering that the number of samples in the medium category of the beverage industry is less, namely 28% or not yet comparable to the sample category of the small category of the beverage industry. Future research suggests employing more samples and better be based on sample class classification or quota determination for each sample category. Hence, the result could be generalized for similar industries.

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