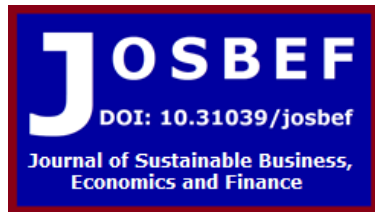


# Halal Quality Management and MSMEs Adaptive Strategy Post Covid-19

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## Abstract

In the condition of uncertainty, organizations try to adapt through natural selection, rational selection and strategic choice. Adaptive strategy is an option through entrepreneurship activities, technology transfer and administrative system (structure, control, and process) to survive and compete on the conditions of uncertainty. This research aims to analyze the effect of halal quality management and adaptive strategy on the superior performance of halal micro small medium-sized enterprises (MSMEs) on the conditions of uncertainty post covid-19. This study was conducted with quantitative approach through focus group discussion of 100 business owners of halal food MSMEs registered in Halal Certification Agency of Indonesia Ulama Council in Central Java. The analysis of factors affecting the performance of halal MSMEs was carried out by using binary logistic regression analysis. The result found out that the performance of halal food MSMEs on the conditions of uncertainty is affected not only by halal quality management, but also by adaptive strategy of halal innovation strategy. This result affects halal MSME strategy in the conditions of uncertainty; not only relying on halal certification to ensure the production and halal distribution chain, but also being innovative and adaptive.

**Keywords:** Quality management, halal, adaptive strategy, uncertainty, MSMEs.

**JEL Classification Codes:** L25, L15, L17.

## **1. Introduction**

Awareness of product or service quality has developed, covering not only technical-economic aspects (quality control era, strategic quality management) (Franceschini et al., 2013), but also social-environment (social sharing and environmentally friendly products), and spiritual aspects, such as in the development of halal industry (Ab Talib et al., 2017; Zailani et al., 2015). The development of halal industry is driven by the growth of Muslim community, Islamic knowledge and lifestyle globally (Rezai et al., 2012). Halal food has become a driving force for the growth of halal industry for Muslim and non-Muslims. Muslim consumers use religious reasons to look for halal products, and non-Muslim consumers consider food quality and health as the main reasons for buying halal food. The halal market includes more than just food and beverages (43%). It has been an increasing demand for halal products worldwide such as modest fashion (clothing) (23%), media (Islamic books, music, movies) (23%), Muslim friendly travel (tourism) (8%), pharmacy (7%) and halal cosmetics (7%) (State of the Global Islamic Economy Report, 2019). The projected consumption of halal products is around \$3 trillion in 2019 including Muslim-majority countries and markets in other countries with Muslim tourists or immigrants (State of the Global Islamic Economy Report, 2019).

Halal industry business owners in Central Java and Indonesia are generally in the form of Micro, Small and Medium Enterprises (MSME) sector. In the halal MSME sector, competitive Halal MSMEs are those that provide high value at low costs. The organizations' performance is superior if it is able to produce high value products or services at the lowest costs compared to other organizations in the same industry or market (Jabnoun et al., 2003). Halal MSMEs should not only rely on the Halal label, but they need to build quality, brand (trust), packaging, distribution, understanding customer needs, and empathy. For consumers, the practice of halal quality management provides not only value for assurance of quality products, but also the added value (spiritual) namely conformity of consumption with sharia, product safety assurance, especially in terms of health, good treatment of slaughtered animals and fair trade. Halal quality management practices are beneficial to improve performance because they increase market confidence in their products. So that they can be accepted by consumers and reach a wider market share. There is a guarantee that halal-certified products are safe in terms of health, making halal products also in demand by non-Muslim consumers (Salindal, 2019).

Halal industrial products have opportunities and challenges in the new normal post-covid-19 era. This opportunity is in line with the increasing consumer demand for hygienic and halal products. The World Health Organization (WHO, 2020) advises the world community to reduce alcohol consumption because it weakens the immune system, and consumes healthier food. This is one of the potentials for halal food as well as optimism about the growth of the halal food sector in the midst of pandemic. The outbreak and risk of COVID-19 raises public awareness about the importance of consuming halal and hygienic food. Consumers are looking for healthy food and healthy lifestyle to boost immunity. Consumer awareness is increasing that non-halal food and food that is not hygienically processed have a great potential to cause disease. The organizational environment is increasingly complex, dynamic, uncertain and unpredictable (Uhl-Bien et al., 2007). The global pandemic in 2020 became a driver of changes that forced every organization to be adaptive to the change. Large-scale businesses are not easy to change, but MSMEs are different. First, they are more flexible to adapt and meet the opportunities amid the change. Second, they are easy to adapt the structures, processes and controls such as in the implementation of health protocols compared to large-scale organizations.

Halal MSMEs need to be adaptive and innovative to survive and capture opportunities in the era of environmental change. The digital economy, green economy, and the global pandemic have changed the way people live and work, and also increased uncertainty. In changing environmental conditions, organizations carry out a process of adaptation and finding opportunities through defensive strategies, reactive and proactive (Smith et al., 1986). Organizations invest costs for technology adoption (tools, processes), labour for adaptation processes. It includes selecting the level of quality and associated technology according to the chosen strategy (Lederer & Rhee, 1995). In pandemic, uncertainty increases, and people's purchasing power decreases. As result, many halal food business owners carry out adaptive strategies. In the conditions of uncertainty, many halal food MSME business owners adapt their strategies, such as changing from eating out to delivery services, adopting health protocol modules, doing hybrid between low cost and differentiation strategies, between profit motivation and social entrepreneurship. In a hybrid strategy between low cost and differentiation strategies, economic business owners reduce their profit margins to survive while finding new markets in changing environmental conditions.

The effect of quality management practices and halal products quality on performance has been explained by previous researches (Ab Talib et al., 2017; Giyanti et al., 2021; Raja et al., 2011;

Salindal, 2019) as well as strategic management on the conditions of uncertainty (Jabnoun et al., 2003; Parnell et al., 2012). However, the literature on adaptive strategies related to halal quality management is still limited, and it becomes the motivation for this research. Thus, this study aims to analyse the effect of halal quality management and adaptive strategies on the performance of halal MSMEs in the conditions of uncertainty post-covid-19.

## **2. Literature Review**

The awareness of quality has emerged since the industrialization era (1980s), starting from the separation of defective products focusing on the final product (Inspection Era), followed by the Statistical Quality Control Era (1920s), the Era of Quality Assurance (Quality Certification) (1960s) and the Strategic Era of Quality Management. Based on the theory of production, the production process is an activity to convert resources into goods or services that can be offered to fulfil consumers' needs and desires. A quality product is a product that is developed, designed, produced and distributed in the most economical, most useful, and always satisfying for customers. Quality is related to not only the final product (quality product or service), but also the quality inputs and processes (Franceschini et al., 2013). Recently, quality products and services are not only economically valuable, but also socially, environmentally and spiritually beneficial (Ab Talib et al., 2017; Zailani et al., 2015).

### **2.1. Halal quality management practices and business performance**

Halal products are products that have been declared halal in accordance with Islamic law, including the raw materials, production processes, distribution processes, storage and supply chains. Halal products include; goods and/or services related to food, beverages, drugs, cosmetics, chemical products, biological products, genetically engineered products, as well as utilities which are applied, used, or utilized by the public (Constitution Number 33 of 2014). Halal (Arab: حلال, ḥalāl; "permissible") is any object or activity that is permitted to be used or carried out in Islam. Halal as one of the five laws, namely: *fardhu* (mandatory), *mustahab* (recommended), halal (allowed), *makruh* (hated), *haram* (forbidden). Halal products are goods or services whose production processes, distribution processes, and storage processes meet the rules of Islamic law.

Product and service quality is an important component to support market performance. Based on Rational Choice Theory, consumers choose to use halal-certified products because of

product quality and religiosity. Quality affects performance with the assumption that customers want to obtain higher utility (benefits) from high-quality goods (Lederer & Rhee, 1995). Consumers have expectations of benefits for the quality of the product. Consumers compare the quality of halal-certified products with other similar or substitute products with the price issued. Improved quality is directly proportional to the cost of production and the price to be paid by consumers. The price customers pay is a function of benefits minus product defects.

Based on this description, products that have superior performance in the market are the ones with high value for customers, but they are produced at the lowest cost (Chen et al., 2015). These high value products are reflected in quality halal products. Empirical studies of the influence of quality management on performance have been proven by previous researches (Raja et al., 2011), while studies of the effect of halal quality management on performance have been carried out (Ab Talib et al., 2017; Giyanti et al., 2021; Salindal, 2019).

Giyanti et al. (2020) in a study of 143 halal MSMEs in Solo, Central Java, Indonesia found that the implementation of halal standards had an effect on operating performance, market performance and financial performance. Salinda (2018) finds that halal certification influences innovation performance and market performance. Innovation activities such as raw material innovation, process innovation, product innovation, market innovation affect product novelty, new product development and halal product quality. Ab Talib (2017) in a study of 500 manufacturing companies in the sub-sector of halal food and beverage industry in Malaysia found that halal certification has an effect on operating performance and business performance.

A study (Yu et al., 2020) in 565 Korean manufacturing companies, found that the implementation of a quality-based strategy, namely the application of TQM (Total Quality Management) had an effect on sales performance. A study (Hassan et al., 2012) through a survey of quality managers of 171 Pakistani manufacturing industries found that quality management practices have a positive impact on performance. Witjaksono (2012) in survey research of 162 automotive component companies in Indonesia found that organizational performance with TQM practices was higher than companies with TQM practices below the average. A study (Raja et al., 2011) evaluated the effect of TQM practices on the business performance of 65 manufacturing companies in Pakistan and found that quality management practices such as in quality control, quality assurance and continuous improvement have an effect on business performance in

manufacturing companies. Based on the description above, the following hypothesis can be formulated.

H1. Halal Quality Management Practices have a positive effect on business performance.

## **2.2. Adaptive strategy and business performance**

The company chooses the level of product quality with a certain technology according to the company's strategy (Lederer & Rhee, 1995). Companies try to maximize profits with certain resources and technology levels. Technology to improve quality and reduce costs. Technology includes equipment investment, research and development activities and human resource training.

Organizations need to evaluate strategies and perpetually innovate to adapt and find opportunities of environmental changes to achieve their goals, structure roles and relationships as well as decision-making processes and control (Smith et al., 1986). In conditions of environmental change, organizations adapt in three ways (Smith et al., 1986), namely natural selection, rational selection and strategic choice. Natural selection is the process of placing oneself naturally where the characteristics of the organizational structure that are in accordance with the organizational environment will survive and show good performance. Rational selection is that managers rationally choose, adopt new structures and processes and leave old structures and processes to survive and develop. The strategic choice approach treats change as a resource.

The process of organizational adaptation to the environment involves aspects of entrepreneurship (innovation), technology adoption, and administration (structure, control and process) (Smith et al., 1986). Entrepreneurial activity is an activity to create and capture opportunities from market balance (Bwisa, 2010). Furthermore, there are four types of organizations (defenders, prospectors, analysers, and reactors) that each of which has a type of strategy in responding to its environment and has specific technological configurations, structures and processes that are in line or consistent with technology (Smith et al., 1986). Defenders or defensive strategies are carried out by organizations that have a narrow product-market domain. Organizational defenders make more internal efficiencies than major adjustments in technology, structure and operating methods. The organizational prospectors always seek market opportunities and simultaneously experiment with potential responses to evolving environmental trends. In the conditions of uncertainty (turbulent), top managers of organizational analysers closely pay more attention to competitors for new ideas and adopt those ideas when they possibly yield profits.

Reactors are the fourth or "residual" after defenders, prospectors and analysers. The organizations are forced to apply the reactor mode due to instability conditions, and unable to choose three other more stable modes.

The effect of adaptive strategies on performance has been explained by previous research (Blackmore & Nesbitt, 2013; Jabnoun et al., 2003; McKee et al., 1989; Parnell et al., 2012; Yu et al., 2020). Parnell et al. (2012) observed the relationship of adaptive strategy to business performance under the conditions of uncertainty on 107 Chinese and 404 Turkish companies. The conditions of uncertainty are reviewed from market, technology and competitor uncertainty. Business performance is measured by sales and financial performance. The results of the study found that under the conditions of uncertainty, companies in China that use defensive strategies (defenders) focusing on internal efficiency have higher performance than the ones applying prospectors (developing innovations) and analysers (analysing the market and adopting innovations). These results are different from the research in Turkey in which the companies that adopt analyser strategy have higher performance than other strategies. Yu, Park, Hong (2020) found that the effect of quality management practices on performance was stronger when the company used a proactive strategy (innovator) and when the company was in a state of growth. Through a survey of 268 middle and senior level managers of companies in the US, Yunis et al. (2013) found that the differentiation strategy had an effect on performance, while the low-cost strategy had no significant effect. Based on the description above, the following hypothesis can be formulated.

H2. There is a significant effect of adaptive strategy on business performance.

### **3. Methods**

This study was conducted by interviewing 112 owner-managers of halal MSMEs in the food and beverage sector registered with the MUI Halal Certification Agency, Central Java, Indonesia. The study was conducted in June-July 2020. Small and Medium Enterprises (MSMEs) are businesses that employ workforce less than 100 people (BPS, 2016), consisting of home-industry scale businesses with 1-4 employees, small-scale businesses with 5-19 employees, and medium-sized businesses with 20-99 employees.



The performance of halal MSMEs on the conditions of uncertainty is measured by the performance of market growth during the last five months period from March to July 2020. The performance of halal MSMEs is measured by binary variables with binary number = 1 for positive market growth  $\geq 0$  which tends to be stable or growing, and binary number 0= for negative market growth  $< 0$ .

Halal quality management is a management practice to manage resources in producing process and quality products, and also halal services. The measurement of halal quality management was developed from previous research (Ab Talib et al., 2017; Giyanti et al., 2021; Salindal, 2019) measured from indicators: halal raw materials, halal production processes, halal supply chains, halal storage and distribution. Halal quality management is measured qualitatively from interviews with owners-managers of halal MSMEs on a 6-point scale from 1 to 6 with “1” representing strongly disagree and “6” representing strongly agree.

Adaptive strategy involves cycles of activity: entrepreneurship (innovation), technology adoption, and administration (Smith et al., 1986). In this study, adaptive strategy is measured qualitatively from interviews with owners-managers of halal MSMEs to identify the strategy of their organization in terms of the four generic strategies of the Miles and Snow typology. This self-typing approach to identification of strategy has been used in previous studies (McKee et al., 1989). The previous studies identified thatbahwa reactor-lowest adaptive capability, defender-limited adaptive capability, analyzer-moderate adaptive capability, prospector-highest adaptive capability (McKee et al., 1989). The construct was measured by a 6-point scale from 1 to 6 with “1” representing strongly disagree and “6” representing strongly agree.

Furthermore, the analysis uses binary Logit regression analysis (Binary Logistics) to separate halal MSMEs with superior and average performance. The form of the equation model for the influence of halal quality management and adaptive strategies on the superior performance of halal MSMEs is as follows:

$$P(SP) = 1 - P(SP) = \frac{\exp^{\alpha + \beta_1 HMQ + \beta_2 AS}}{1 + \exp^{\alpha + \beta_1 HMQ + \beta_2 AS}}$$

Description: P(SP) = probability of superior performance of halal MSMEs, P(B) = probability of average performance, HMQ = halal quality management, AS = adaptive strategy,  $\alpha$



= constantan,  $\beta$  = slope. Testing the fit model using Cox & Snell R Square, Nagelkerke R Square and Hosmer and Lemeshow Test.

#### 4. Results

Model fit analysis can also be used to analyze the value of Hosmer and Lemeshow's Goodness of fit. The estimation results obtain the Hosmer-Lemeshow value ( $p = 6.352 > 0.05$ ), so the model is fit (empirical data is the same as the model or the model is fit or acceptable). The Nagelkerke R square value can be interpreted as the  $R^2$  value in multiple regression. The value of Nagelkerke's  $R = 0.746$  indicates the variability of the dependent variable which can be explained by the variability of the independent variable of 74.6%. The remaining 25.4% is influenced by other variables outside the model studied.

**Table 1**

Summary of Binary Logit Equations

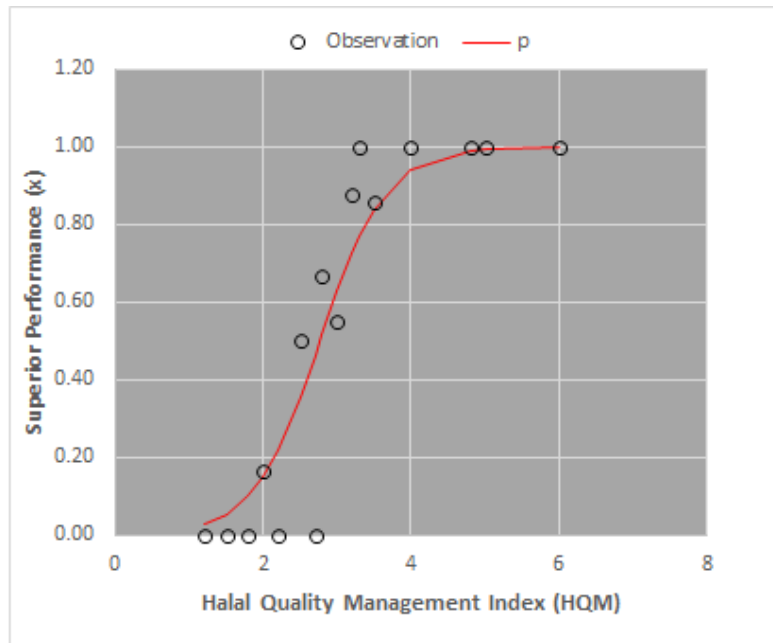
Tabel 1. Summary of Logit Biner Equations

	$\alpha, \beta$	$Exp$	$\rho$
Constant	-26.292	0.000	0.000
HQM	3.989	54.011	0.000
AS	3.985	53.800	0.000
<i>Cox &amp; Snell R Square</i>	0.551		
<i>Nagelkerke R Square</i>	0.746		
<i>Hosmer-Lemeshow test (p)</i>	6.352		

Description: HQM= Halal quality management, AS= Adaptive Strategy

The model of halal quality management practices and adaptive strategies in predicting performance are as follows:

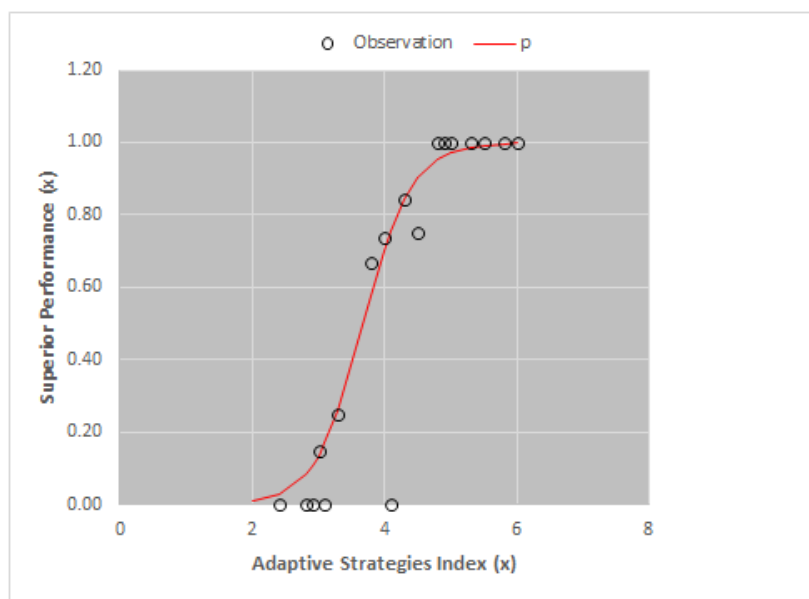
$$P(SP) = 1 - P(SP) = \frac{\exp^{-26.292+3.989HMQ+3.985AS}}{1 + \exp^{-26.292+3.989HMQ+3.985AS}}$$



**Figure 1**

Halal Quality Management Practices on Superior Performance of Halal MSMEs

Source: processed from interviews with Halal MSME business owners (2020)



**Figure 2**

Adaptive Strategy to Superior Performance of Halal MSMEs

Source: processed from interviews with Halal MSME business owners (2020)

Halal quality management practices have a significant effect on the competitive advantage of Halal MSMEs ( $\beta = 3.989, = 0.000$ ). Halal quality management has a regression coefficient (Exp) of 54.011. It means that halal MSMEs with superior performance have a halal quality management index score of 54.011%, and it is higher than halal MSMEs with average performance. The simulation results of halal quality management in predicting the performance of halal MSMEs are presented in Figure 1. The higher the halal quality management relates to greater probability of being a superior performance. This model assumes other variables which are dependent, while the change is on halal quality management.

The result of this study found that the adaptive strategy significantly affects the competitive advantage of Halal MSMEs ( $\beta = 3.985, = 0.000$ ). The Adaptive Strategy has a regression coefficient (Exp) of 53,800. It means that halal MSMEs with superior performance have an adaptive strategy of 53,800% which is higher than halal MSMEs with average performance. The simulation results of the effect of adaptive strategies on the probability of competitive advantage of Halal MSMEs can be seen in Figure 2.

## 5. Discussions

Halal MSMEs are in a new economic era called the “more-from-less economy”. Superior halal MSMEs possesses superior performance that provide high value at low costs. The results of the study found that the practice of halal quality management had a significant effect on the competitive advantage of Halal MSMEs ( $p < 1\%$ ). The results of this study support the results of previous studies on quality management in general (Hassan et al., 2012; Raja et al., 2011; Witjaksono, 2012; Yunis et al., 2013), as well as halal quality management (Ab Talib et al., 2017; Giyanti et al., 2021; Salindal, 2019). Halal food products and services are related not only to the use of halal materials and production processes, but also to build trust, halal supply chains, halal packaging and storage, understanding customer needs (Ab Talib et al., 2017; Giyanti et al., 2021; Salindal, 2019). Halal industrial products have potentials in the new normal era due to the increasing consumer demand for products that are processed, stored, distributed with hygienic and halal standards. The transparency ensures that the operations and supply chains are completely transparent, trusted and traceable. Halal industrial products have potential in the new normal era because the lifestyle of the consumer segment, especially Muslims, is more spiritual.

The halal supply chain is one indicator of the quality of halal products. Some halal MSMEs such as food stalls, catering, have their own farms, fishponds, gardens to easily control the halal supply chain. During the COVID-19 pandemic, each region can be easily isolated from other regions. It encourages the development of independence in the local halal supply chain, both at the country and smaller regional levels. Business owners in the industrial sector may not depend on the existing supply chain of raw materials and the demand chain. At any time, the market destination country/region may close itself off from other countries, so business owners need to easily shift their market to other countries/regions.

The results of this study found that the adaptive strategy had a significant effect on the competitive advantage of Halal MSMEs ( $p < 1\%$ ). It supports previous research on adaptive strategies on performance under the conditions of uncertainty (Parnell et al., 2012; Yu et al., 2020). In conditions of uncertainty such as in the case of the new normal post-covid-19 pandemic, many business owners adapt their strategies, such as carrying out internal efficiency, hybrid strategies between online delivery services and eating-in with health protocols, hybrid between low cost and differentiation strategies. Regarding the new normal conditions, halal MSMEs can use a hybrid strategy (Yang et al., 2020) related to production, service and cooperation. Halal MSMEs can adapt through innovation (new markets, new marketing channels, new products, technology adoption). So far, consumers have used delivery services for ready-to-eat foods and beverages, and it has become a daily routine from occasional ordering to repeat ordering (habitual/routine). Online shopping is starting to shift from the desire-basis products to need-basis ones. Consumer online shopping is expanding from non-essential to essential goods, and the volume of purchases is getting bigger.

Halal food business owners in the food stalls, catering and restaurant sectors are the most affected by social distancing restrictions. The business owners of halal food stalls, halal catering and halal restaurants are generally located in certain locations close to their consumer segments, such as: Islamic boarding schools, Islamic education, religious tourism, public preaching, seminars and other religious social activities. When educational activities, religious tourism, public preaching, recitations, seminars and other religious social activities experience restrictions, it will indirectly have an impact on the supporting sectors such as halal food stalls, halal catering and halal restaurants.

The organizational environment is increasingly dynamic. Halal MSMEs has an advantage for organizational flexibility to be adaptive (in structure, process, control). Halal MSMEs have a dynamic capacity through an adaptive model that changes easily under regional quarantine conditions and normal conditions. The halal food MSME sector can have two modes of service change. First, under normal conditions with no positive cases in an area and a low risk of spreading from other areas, halal food MSMEs can continue to operate normally according to their functions while maintaining environmental hygiene. Second, in a pandemic condition with the potential for high spread, the restaurant sector can use home delivery services, especially for busy consumers who are working at home. In a pandemic condition, the halal food MSME sector can cooperate with technology service providers, hotels, and other services to provide work, travel, work from home. However, the MSME sector in general has capacity which is dynamic by developing modules (soft & hard), so it can be easily applied through (switch) in several modes of organizational adaptation according to regional conditions. The PnP approach for decision modelling use the analogy of the "LEGO block" concept that businesses are easy to reassemble to adapt and respond to environmental changes (Tan & Noble, 2007).

## **6. Conclusion**

The results of the study found that the performance of halal food MSMEs was influenced not only by halal quality management, but also by adaptive strategies through halal innovation in the conditions of uncertainty post-covid-19. The results of this study have implications for the strategy of halal MSMEs in the new normal era. The halal MSMEs need to be competitive not only relying on halal certification to ensure halal production and supply chains, but also being adaptive and innovative.

The practical implications of this research are in the following details. Regarding halal quality: (1) Halal MSMEs and related parties need to ensure hygiene and halal standards with a transparent process. Transparency is ensuring operations and supply chains to be completely transparent, trusted and traceable. Halal MSME business owners may not only depend on the existing supply chain and demand chain, but they must have many alternative supply and demand chains. Related to adaptive strategies: (1) Halal MSMEs may not only rely on the Halal label, but they need to build quality, brand (trust), packaging, distribution, understanding customer needs, empathy. (2) Halal MSMEs can use hybrid strategies related to production, service and

cooperation. The hybrid strategy is that halal MSMEs apply a changeable mode that easily transform under regional quarantine conditions and normal conditions, between production at the factory and home, automation of sub-contractors, on-line and off-line services, in-store sales and delivery services. In a dynamically changing environment, halal MSMEs need to be supported by modules that make it easier for business owners to make decisions. Halal MSMEs need to be supported by modules that make it easier for business owners to make decisions. (3) Halal MSMEs must go online and start digitalization steps according to their sectors.

This study has several limitations. First, the research was conducted with a cross-sectional design survey approach, so the study cannot involve changes due to changing in time. Second, MSMEs generally do not have well-documented market and financial information, so this study uses qualitative data from interviews with halal MSME business owners. Third, the research was conducted in a developing country in Indonesia with a Muslim majority. Other research can conclude different results in different contexts such as culture, technological developments, markets. Research with different contexts in other countries is needed.

## **7. Suggestion**

From the conclusion, it can be suggested that the research can be continued to develop especially related with the limitation of the approach, document research market and financial development. The researchers in the future can find the weaknesses this research and give solution and contribution, so the gap find will specific discussion especially with MSME's topic approach

The research of alternative supply and demand relates with Halal MSSEs must find the alternative way, not only focus with the label, brand, packing and distribution and need of the costumer and empathy.

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