

HALAL APPROACH ON FOOD PRODUCT DESIGN IN THE VILLAGE LEVEL

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Abstract: *This research aims to determine the management model for halal products at the village level. The model used is the Tetrapreneur Mutual Cooperation Movement (G2R). The four approaches to this tetrapreneur are business chain, business market, business quality and business brand. The object of this research is the fried meatball products in Bejiharjo Village, Gunungkidul Regency, DI Yogyakarta. The method used is descriptive qualitative approach with in-depth interviews and literature study. The results of this study indicate that the development of food product designs at the village level can be carried out with the support of capital access, product innovation, consumer awareness, halal services, digital marketing and ancillary services.*

Keywords: *Halal Approach, Halal Food, Food Product Design, Village Level*

INTRODUCTION

The implementation of halal policies in Indonesia is a breath of fresh air for the Muslim community in Indonesia. The application of Law Number 33 of 2014 Guaranteed Halal Products (JPH) is not only an advantage for the Muslim community, but the Indonesian people as a whole, especially from the trade aspect. Thomson Reuters & Dinar Standard (2019) stated that the potential market share of halal food in Islamic countries reached USD 2,107 billion in 2017 and is predicted to reach USD 3,007 billion in 2023.

The enactment of the JPH Law requires products in Indonesia to apply to guarantee their halalness, one of which is by taking care

of halal certification. In recent years, there have been around 55,626 agencies that received halal certification in 2018. In addition, many Micro, Small and Medium Enterprises (MSMEs) have also begun to pay attention to the halal aspects of their products, and have also applied for halal certification. In addition, when there are 688,615 products that have received halal certification in Indonesia. However, not many stakeholders in Indonesia have developed village-based branding of halal products.

Behind the scarcity of village-based halal product management, Bejiharjo Village in Kab. Gunungkidul has started with the Global Gotong Royong (G2R) Tetrapreneur program. This program aims to raise the potential of the

village with available local wisdom. This program departs from the local wisdom of the character of the Indonesian people who help each other and work together. This program is a flagship program of the Regional Development Planning Agency (BAPPEDA) of the Special Region of Yogyakarta (needs to be updated) in collaboration with Gadjah Mada University.

CONCEPTUAL FRAMEWORK

Halal Product Management

Halal Product Management, according to Tieman in Zailani (2020) believes that halal food and products are not only limited to raw materials, but halal quality can also be questioned if the product is exposed to illicit substances in any process in the entire supply chain, storage and transportation process. The Halal Orientation Strategy according to Zailani (2015) classifies halal in several parts such as halal ingredients, halal staff, halal production processes, halal storage and halal delivery. This means that the halal status of a new product can be certified if the raw materials and processes are halal. A Muslim should pay attention to all production processes, tools, production lines, piping, conveyors or other requirements, which must be free from non-halal materials for halal production. There should be no contamination with non-halal products either in storage or in shipping and distribution. Although this process may be expensive, there are still many customers who are looking for halal products

The Halal Micro, Small and Medium Enterprises (UMKM) sector is one of the parties

that must receive special attention in improving the management of halal products. In general, MSMEs have become the main economic pillar of the Indonesian state. The contribution of MSMEs is 60.34% of the total Gross Domestic Product (GDP) of Indonesia (Coordinating Ministry for the Economy, 2018). Even the MSME sector is able to employ more than 107.6 million Indonesians. Even according to data from the Ministry of Cooperatives and SMEs (2017), the contribution of MSMEs to the country's foreign exchange reached Rp 88.45 billion.

In the halal business competition, a strategy is needed so that a business can survive and attract customers. This strategy refers to organizational policies, goals, actions and the allocation of organizational resources to run effectively and appropriately (Quinn, 1988) in Zailani. No exception in the management of halal products, the right strategy is needed to compete in the global market. Wilson and Liu (2010) in Zailani believe that halal products have a competitive advantage over other products if managed with the right management and strategy.

Halal companies and industries should be able to maintain a competitive advantage in designing unique business strategies. Moreover, the halal orientation strategy ensures that the halal principle must be followed by food producers. Organizations must also consider their long-term decisions carefully and must predict their long-term operational performance. Therefore, the halal orientation strategy in halal product management is not only useful as a reference when developing new strategies, but can also be used by halal food companies in

finding new and valuable business directions (Zailani, 2015). Furthermore, referring to the Halal Standards in Malaysia, a company must produce, prepare, handle and store halal food, and categorize its operating strategy. As for Zailani et al. (2020) tries to refine the halal orientation strategy in halal product management into the following elements: halal materials, halal production processes, halal staff and halal storage and transportation. These four categories are carried out to maintain halal quality in food.

Halal Food in the Food Industry

The term "halal" comes from Arabic which means something that is permissible or lawful. Halal is a broader term that covers almost all aspects of a Muslim's life. However, it is very narrowly used in the legal context of Muslim countries, especially when it comes to meat and poultry, in non-Arabic speaking countries (Halim in Shah et al., 2019).

Allah also commands humans and especially Muslims to consume halal food, both in terms of substance and in terms of how to obtain it. Allah says in the Quran:

يَا أَيُّهَا النَّاسُ كُلُوا مِمَّا فِي الْأَرْضِ
حَلَالًا طَيِّبًا وَلَا تَتَّبِعُوا خُطُوتِ
الشَّيْطَانِ إِنَّهُ لَكُمْ عَدُوٌّ مُبِينٌ

"O mankind, eat lawful and good from what is on the earth, and do not follow the steps of Satan, because Satan is a real enemy to you." (Surat al-Baqarah: 168)

In another verse it is stated about the importance of eating halal food as stated in Surah

Al-Maidah verses 87-88:

يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تُحَرِّمُوا طَيِّبَاتِ
مَا أَحَلَّ اللَّهُ لَكُمْ وَلَا تَعْتَدُوا إِنَّ اللَّهَ لَا
يُحِبُّ الْمُعْتَدِينَ (٨٧) وَكُلُوا مِمَّا رَزَقَكُمُ
اللَّهُ حَلَالًا طَيِّبًا وَاتَّقُوا اللَّهَ الَّذِي أَنْتُمْ
بِهِ مُؤْمِنُونَ

"O you who believe, do not forbid what is good which Allah has made lawful for you, and do not transgress. Verily, Allah does not like those who transgress. And eat lawful and good food from what Allah has provided for you, and fear Allah in whom you believe." (Surat al-Maidah 87-88)

The word *halalan* itself is found in five places in the Koran, where four of them are side by side with the word *thoyyiban*. The location of the word *halalan* is in (a) QS. An-Nahl verses 114-116, (b) QS. Al-Baqarah verse 168, (c) QS. Al-Maidah verses 87-88, (d) QS. Yunus verse 59, and (e) QS. Al-Anfal verse 69.

With the many sentences of *halalan thoyyiban* in the Koran, it shows the importance of the position of halal in Islam. Still from the same root word, at least the root word *ح ل ل* is found in 52 places in the Quran. One of its derivatives is that the word *uhilla* (permitted) is found in five places in the Al-Quran, namely in Surah Al-Maidah verse 4 twice, Surah Al-Maidah verse 5, Surah Al-Maidah verse 96 and Surah Al-Baqarah verse 187. said in the Qur'an Surah Al-Maidah verse 5, "Today good people are lawful for you".

Another derivative of the word is *ahalla* which has the meaning of justifying. Allah says in Al-Baqarah verse 275, "Allah has permitted

trading and forbade usury". The verse specifically discusses the lawfulness of buying and selling transactions, and the prohibition of usury. This shows that halal is not only in the aspect of food and drink, but in all aspects of life.

Another view (Rezai et al., 2011) states that halal is something that is sanctioned by Islamic law. In the context of food, halal products describe that these products have met high standards of hygiene, safety and certain levels of nutrition. When most people are aware of health, then the principle of halal is no longer limited to discussing a particular religion, but has also paid attention to healthy and hygienic cooking styles. However, most non-Muslim consumers still view halal food products as limited in terms of how to slaughter animals. Do not really understand that halal also pays attention to the level of cleanliness and food quality. However, currently halal accreditation is starting to be understood as certain characteristics and standards that can be enjoyed by not only Muslim consumers but also non-Muslims.

Islam and Chandrasekaran (2013) in Shah et al. (2019) states that the role of religion cannot be ignored, because religious beliefs tend to influence people's lifestyles, choices and consumption. They also believe that there is a close relationship between religion and consumption by the community, including the products they use. In the end, this has become a potential market for its own needs to be fulfilled according to religious beliefs. In the context of the needs of the Muslim community, halal products are an absolute necessity that must be met by producers.

Manufacturers all over the world are finally turning to this segment of the halal market to attract Muslim consumers to buy their products. Many consumers end up doing business to meet the needs of Muslim consumers by marketing halal products and services. For this reason, the concept of Islamic marketing was created which was inspired by the need for halal products from Muslim consumers around the world. Sandikci and Ger in Shah et al. (2019) sees that consumption needs and marketing practices in Islam have continued to increase in recent years.

Other researchers such as Riaz and Chaundry (2004), Bonne and Verbeke (2008), Abdul et al. (2009), Muhammad et al. (2009) applied the hazard analysis and critical control points (HACCP) approach to the halal food supply chain. HACCP is a standard for analyzing potential hazards in the food supply chain, identifying critical points in the supply chain with known hazards, and deciding which ones should be discarded to maintain food safety (Mitchell, 1992 in Tieman et al., 2012). This HACCP standard is also influenced by food regulations, the role of industry, government policies and regulations, and other food safety training (Pun and Bhairo-Beekhoo in Tieman et al., 2012).

In implementing good halal management, it needs to be accompanied by good supply chain management. Tieman (2011) put forward the concept of halal supply chain management as a way to ensure the quality of halal food from upstream to downstream. Management of halal products also extends halal integrity from the source and raw materials to the point of purchase by consumers.

Tieman et al. (2012) suggested that the basis of halal supply chain management is determined by three factors, namely: direct contact with haram (forbidden), risk of contamination and perceptions of Muslim consumers. In this concept, risk is based on product characteristics, for example whether the product is dry or wet, and whether it is mass-produced or small units. The perception of Muslim consumers is based on the needs of certain segments, such as Islamic schools, local fatwas and local customs.

RESEARCH METHOD

This study uses a literature review method and in-depth interviews with program managers in Bejiharjo Village and the initiator of the G2R Tetrapreneur Movement program. In this G2R Tetrapreneur Movement, Bejiharjo Village tries to identify market potential through four stages, starting from the entrepreneurial chain, entrepreneurial market, entrepreneurial quality and entrepreneurial brand. Here are the details of the stages:

No	Tetrapreneur Stages	Applications	Field Facts
1	Entrepreneurial Chain	Seeing local potential in Bejiharjo Village (There are many meatball entrepreneurs and beef supply from cattle farmers)	Implemented
2	Entrepreneurial Market	Mapping what products can be in demand with the existing potential (making meatball processed)	Implemented
3	Entrepreneurial Quality	There are product production achievements	Production target of 1000 packs a month (2020)
4	Entrepreneurial Brand	Create logos and product designs	Conducting promotions, online, offline and exhibitions (2020-onwards)

From this potential, the management of the G2R Tetrapreneur program in Bejiharjo village decided to develop Halal Fried Meatballs (Basreng) because the majority of the villagers are meatball entrepreneurs. This idea is then discussed more maturely and the formulation is sought. By relying on human resources and a clear job design, a village-level halal basreng management model was formed. The management of this halal basreng product is carried out by a product monitoring team, halal assistants, quality assurance team, and the community as product suppliers.

with an area of 2,200 ha. The total population of Bejiharjo village in 2016 reached 15,240 people spread over 20 hamlets/hamlets. The majority of the original inhabitants of Bejiharjo Village work as farmers, breeders and meatball entrepreneurs. Based on the narrative from Wakhit (2020), around 2000 residents of Bejiharjo Village work as cattle breeders and suppliers of the main raw material for meatballs. So that the availability of raw materials for making meatballs is very abundant and can be supplied from local farmers. This is a potential strength of the village, because the beef supply chain comes directly from the village.

DISCUSSION

Villa Potential Mapping

Bejiharjo Village is one of the villages in Karangmojo District, Gunungkidul Regency

Basically, this program did not come immediately, there were mature discussions between several village elements such as residents, village youth, and village heads. After

it was decided, the drafters and regulators got involved. The conceptor of this program comes from UGM, while the regulator is the Planning and Development Agency (BAPPEDA) of the Special Region of Yogyakarta. So that there is

no overlapping of policies or program rejection from local residents if at any time they experience problems. Because from the start it has used the principle of gotong royong between village elements, drafters and regulators.

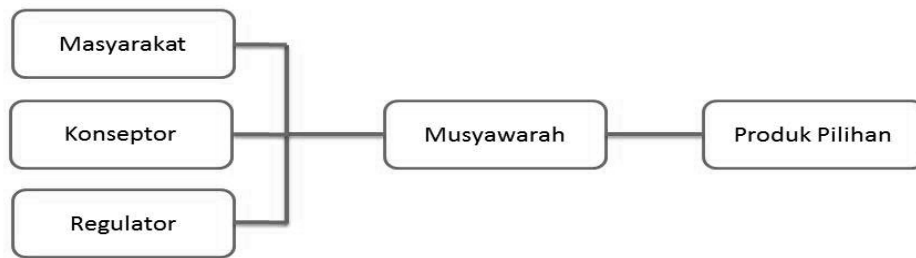


Figure 1. Mechanism of Decision Making for Halal Products in Bejiharjo Village

After determining the product of choice, the next step is to carry out the production process. According to Tieman (2011), before a product is produced, it is very important to know the supply chain. Moreover, if they want to produce halal products, producers must know the composition of the market map. If the halal supply chain is good and the market potential also accepts it, then the product is feasible to be produced.

Management Model

The G2R Tetrapreneur program is also part of the implementation of government programs through village funds. In Law no. 6 of 2014 concerning Villages, every village is recommended to have a Village Owned Enterprise (BUMDes). With the G2R Tetrapreneur movement, Bejiharjo BUMDes is the spearhead of activities and product sales. One of the parameters for the success of this program is the creation of jobs in a village.

With BUMDes-based management, the village has a special management in the BUMDes whose task is to oversee product quality, collect products

from community bases, marketing functions and manage company finances. All of these things will not be carried out properly without a good quality management system.

According to Zimon (2017), the implementation of a quality management system can improve the quality of the food supply chain. This quality improvement can be seen from collaboration between suppliers, improving the quality of customer service and quality control of a product. However, the implementation of this quality management system must be done carefully so that the results can be effective and efficient.

At least the quality management system can be divided into two parts, namely the quality of products and the quality of human resources (HR). Likewise, the Bejiharjo BUMDes through its G2R Tetrapreneur Program, which divides the production team and the marketing HR management team. As an illustration, the G2R Tetrapreneur program receives funding support from village funds of Rp. 100 million a year for 5 years.

a. Production Team

Vincent et al (2018) argue that production planning is indispensable in business activities because it is the lifeblood of any manufacturing firm. Meanwhile, Rut and Wolczanski (2016) have the view that the production process must start from supply control, then the production process, control of products, evaluation of product's quality, sales in the warehouse until the product reaches the consumer. Therefore, basreng production also follows the production planning and production process stages in order to produce quality products.

The basreng production team consists of 14 people who are divided into two groups, namely the cutting and frying group. Each group consists of seven people with a focus on their respective functions. The group that does the basreng cutting must know very well the standard size of the product. All sizes are adjusted to the operating standards that have been made. Furthermore, the frying group must also know the standard of basreng maturity, so that the taste is the same and does not change. The cooking oil used must also be lean and should not be replaced.

Interestingly, the production process is carried out in the homes of each resident. As for the standard basreng seasoning, it has two flavors, namely original and spicy. The seasoning has been provided by a special team at the BUMDes production house, so that even though the person frying it is different, the taste remains the same. As a collector/collector of processed

basreng products produced from several houses, BUMDes still has standard of taste and product quality. So that if there is a product that does not meet production standards, it will be returned to the community.

It must be admitted that ideally BUMDes should have one large production house, so that all Basreng production activities can be carried out simultaneously. However, with all the existing limitations, currently the production process is still carried out from several houses, then collected in the same place for the packing process. In the future, there must be investment in making village production houses so that the quality of basreng can be more standardized.

b. Marketing Team

In doing business, good human resources must work together with the marketing team in order to maximize profits from the severity of market competition (Edwards et al., 2011). After the production is completed, it is the turn of the marketing team to move. This team is in charge of designing logos and food packaging, packaging forms, marketing strategies and managing the halal certification process. Halal certificates are important so that Basreng products are more accepted in the market, especially because the main raw material comes from meat. In addition, the marketing team must also decide what a reasonable selling price is based on production costs and marketing costs.



Figure 2. Table of Production System Basreng G2R Tetrapreneur Bejiharjo

In Figure 2 it can be seen that there is a one-door packaging process from the BUMDes. With good and professional packaging, it is hoped that the selling power of the product can be further increased. But the process doesn't just stop at packaging. The marketing department must maximize all efforts to achieve the number of sales as expected. In this case, the marketing team becomes a successful milestone whether the product is accepted by the market or not. As an illustration, the product has been marketed through social media and also stores the product in a gift shop in the Special Region of Yogyakarta. In addition, he also held exhibitions in several places.

Halal Product Marketing and Business Strategy

Nowadays, the world's countries are entering the era of the industrial revolution 4.0. Almost all aspects of life have begun to shift to the online system, both in the education, business, and entertainment sectors. The products produced by Bejiharjo Village should be appreciated for all their innovations and mutual cooperation. It's just

that it still has some shortcomings, especially in terms of product marketing.

Especially in the current Covid-19 environment, it is almost impossible to sell products face-to-face or offline. So it is necessary to innovate the type of marketing, by utilizing market places, online motorcycle taxis or by delivering directly if the area is relatively close. There are at least two main strategies in developing the business run by Bejiharjo BUMDes, namely increasing access to capital utilization and product innovation.

First, access to capital (capital access) will help increase the production capacity of a halal MSME. In addition, business expansion will be easier to carry out if it is supported by adequate funds. According to Noraini Ombi, et al (2018) there is an interesting phenomenon regarding business development services for MSMEs.

This study wants to compare how the impact on business development services is between MSMEs that are financially supported, and those without financial support. Then it was found that

only businesses that received financial assistance could improve the performance of MSMEs. The results of this study are exactly like the findings of Jauharyah (2014) and Yusoff and Yacob (2010). The research provides recommendations to local governments to make regulations that support the provision of financial services for MSME actors, especially halal MSMEs.

Second, it is necessary to increase product innovation (product innovation) in halal MSMEs. According to Ogamba (2018), it is stated that there is a need for innovation so that business can be more profitable. And one of the spearheads of this innovation is youth. In this case, Bejiharjo BUMDes need to empower youth in selling Halal MSME products such as the Basreng, because they will be able to create jobs, reduce economic dependence, and improve market system development.

Even if possible, in the atmosphere of the Covid-19 pandemic, Bejiharjo BUMDes can also develop business elements in basreng raw materials, namely fresh halal meat and also some basic necessities. In essence, this business does not eliminate the characteristics of the G2R Tetrapreneur program which is based on the value of gotong royong. As a business originating from the village, the marketing team was able to create the tagline "Shopping in the Village". In the end, in-depth discussions and synergies are needed between village officials, drafters and regulators so that Beringharjo's G2R Tetrapreneur products and other halal MSME products can compete in the market.

Demikianlah beberapa langkah yang dapat dilakukan agar produk yang menjadi andalan dari

Desa Bejiharjo dapat menembus pasar domestik dan internasional. Dalam hal ini, bukan hanya Desa Bejiharjo saja yang dapat memaksimalkan usaha UMKM Halal tersebut, namun hendaknya usaha di wilayah lainnya juga dapat dioptimalkan agar dapat diterima pasar dan memberi dampak ekonomi yang baik bagi masyarakat setempat.

Third, producers must understand what consumers want (producer awareness). In this case, there are many aspects that producers can improve, namely pick-up service, product quality that continues to increase, relatively affordable prices and product quality (taste) aspects that are really maintained. In addition, there is a guarantee for consumers if the product purchased is not in accordance with the product quality qualifications promised by the manufacturer. (Suhartanto et al, 2020).

Fourth, strictly maintain halal products (halal services). Of the many aspects of buying and selling food, the halal aspect of the product, especially the raw material for meat in fried meatballs (basreng) is one of the main critical points that consumers will consider. Especially for consumers who are Muslim, the halal aspect is of course a first priority when deciding to buy. Therefore, in addition to fried meatball products, they must have halal certification, these products must also be kept halal from time to time (Sanchez and Moral, 2020). Even the Muslim millennial generation who is famous for being critical in choosing products also pays great attention to this halal aspect in deciding to purchase products (Amalia et al, 2020).

Fifth, the digital marketing aspect (digital marketing). In this aspect, the development of technology-based marketing is the emphasis. On the other hand, it is also necessary to have optimal branding so that halal village products can be more attractive to consumers from anywhere (Jaiyeoba et al, 2020).

Sixth, optimizing the tourism attraction side (ancillary services). The entertainment aspect can often boost sales of a product (Spillane in Ardy and Yulihhasri, 2020). For example, by inviting tourists visiting Bejiharjo Village to follow the process of making fried meatballs (basreng).

Those are some steps that can be taken so that the products that are the mainstay of Bejiharjo Village can penetrate the domestic and international market. In this case, it is not only Bejiharjo Village that can maximize the Halal MSME business, but businesses in other areas should also be optimized so that they can be accepted by the market and provide a good economic impact for the local community.

CLOSING

Bejiharjo village has considerable potential in the development of the MSME industry, namely fried meatballs. The geographical aspect has a very large influence on the development of MSMEs for this halal food product because it is located near the source of the raw material for fried meatballs, such as many cattle farms. In addition, the community has always been used to producing meatballs for home businesses which are the mainstay of the Bejiharjo Village community. However, there are also many

obstacles faced by MSMEs for halal food products to develop their businesses, ranging from limited capital aspects, lack of good managerial skills, to marketing constraints. Several steps that can be taken to optimize sales of fried meatballs (basreng) include capital access, product innovation, consumer awareness, halal services, digital marketing and ancillary services.

REFERENCES

- Amalia, F.A., Sosianika, A. & Suhartanto, D. *Indonesian Millennials' Halal food purchasing: merely a habit? British Food Journal*, 122(4)
- Ardy, N. & Yulihhasri. (2020). *Strategi Pengembangan Atraksi Pengolahan Rendang (Marandang) Sebagai Daya Tarik Wisata Gastronomi di Kampung Rendang Kota Payakumbuh. Jurnal Ekonomi*, 23(2), 134-154.
- Edwards, J et al. 2011. *Managing Marketing Teams*. Journal of Business and Economics Research, Vol. 6 No. 1, p. 79-84
- Jaiyeoba, H.B., Abdullah. M.A., & Dzuljastri, A.R. *Halal certification mark, brand quality, and awareness. Journal of Islamic Marketing*.
- Kementerian Perekonomian. 2018. Kementerian Koperasi dan Usaha Kecil Menengah. 2017.
- Ogamba, IK. 2019. *Millennials Empowerment: Youth Entrepreneurship for Sustainable Development. World Journal of Entrepreneurship, Management and Sustainable Development*, Vol. 15 No. 3 : p. 267-278.
- Ombi, N et al. 2018. *The Effect of Business Development Services on Small Medium*

- Enterprises (SMEs) Performance. International Journal of Academic Research in Business and Social Science*, Vol. 8 No. 3 : p. 117-130
- Rezai, G et al. 2011. *Non-Muslim consumers' understanding of Halal principles in Malaysia. Journal of Islamic Marketing*, Vol. 3 No. 1, p. 35-46
- Sanchez, A.V., & Moral, M. *Halal Tourism: Literature Reviews and Experts' View. Journal of Islamic Marketing*, 11(3)
- Suhartanto, D., Marwansyah, Muflih, M., Najib, M.F. & Fatur Rahman, I. (2020). *Loyalty Formation Toward Halal Food. British Food Journal*, 122(1), 48-59
- Rut, J and Wolczanski, T. 2016. *Evaluation of The Production Process and The Company Startegic Position. Journal Marketing i Rynek*, p. 745-756
- Shah, SA et al. 2019. *Halal Marketing: A Marketing Strategy Perspective. Journal of Islamic Marketing*, p. 1-15
- Thomson Reuters & Dinar Standard. 2019.
- Tieman, M et al. 2012. *Principles in Halal Supply Chain Management. Journal of Islamic Marketing*, Vol. 3 No. 3, p. 217-243
- Vincent, O et al. 2018. *Production Planning and Organizational Effectiveness. Strategic Journal of Business and Social Science*, Vol. 1, p. 1-28
- Zailani, S et al. 2020. *The influence of halal orientation Strategy on Financial Performance of Halal Food Firms. Journal of Islamic Marketing*, Vol. 11, No. 1, p. 31-49
- Zimon, D. 2017. *The Impact of Quality Management System on Effectiveness of Food Supply Chains. TEM Journal*, Vo. 6 No. 4 : hal. 693-698.