

Halal Foodstuff Innovation: A Review from The Perspective of Maqasid al-Daruriyyah

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Sumayyah Abdul Aziz^{1*}, Sakinah Harith², Mohd Hapiz Mahaiyadin³, Nizaita Omar¹, Wan Anwar Fahmi Wan Mohamad⁴, Ismahafezi Ismail⁵, Ain Khadeeja Zainuzzaman¹

- 1 Faculty of Islamic Contemporary Studies, Universiti Sultan Zainal Abidin, 21300, Terengganu, MALAYSIA. Sumayyahaziz@unisza.edu.my; nizaita@unisza.edu.my; ainkhadeeja@gmail.com
- 2 Faculty of Health Sciences, Universiti Sultan Zainal Abidin, 21300, Terengganu, MALAYSIA. Email: sakinahharith@unisza.edu.my
- 3 Academy of Contemporary Islamic Studies, Universiti Teknologi MARA 40450 Shah Alam, Selangor, MALAYSIA. Email: mohdhapiz659@uitm.edu.my
- 4 Faculty of Bioresources and Food Industry, Universiti Sultan Zainal Abidin, 21300, Terengganu, MALAYSIA. Email: fahmimohamad@unisza.edu.my
- 5 Faculty of Informatics and Computing, Universiti Sultan Zainal Abidin, 21300, Terengganu, MALAYSIA. Email: ismahafezi@unisza.edu.my

*Corresponding Author; email: sumayyahaziz@unisza.edu.my

Abstract

Innovations in the food industry have a large impact on the citizens in Malaysia. Towards Wawasan 2020, Malaysia has celebrated progress from a technological aspect and innovations from various sectors. Malaysia is also in the process of becoming among the primary global halal hubs. Hence, various forms of support have been given by government and private sectors to ensure that the innovations and empowerment of the halal industry continue to expand in Malaysia. Some issues arise when the food innovations are done using constituents from questionable sources as well as contamination of enzyme cells and genetics from various sources. Although the final food innovation creates foods that seems halal, this matter requires extensive research to ensure the welfare of Islam's ummah. The objective of this study is to examine the level of foodstuff innovation as well as its perspective from the aspect of Maqasid al-daruriyyah. To conduct this study, analysis has been done towards issues related to halal and the concept of daruriyyah in food production. In-depth semi-structured interviews were also performed on several bodies involved in the halal industry, namely JAKIM, Mardhiyyah Hotel and Suits, MARDI, and UPM. The result of this study finds that foodstuff innovation in Malaysia must utilise the Maqasid al-daruriyyah application to ensure the innovations made are aligned with the concepts of halal and *toyyib* (universal values) which are pillars of Al-Quran and Sunnah.

Keywords: *Halal, Maqasid, Al-Daruriyyah, Innovation, Food*

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Introduction

According to *Kamus Besar Bahasa Melayu* (2002), food is a sustenance, provision, nourishment, cuisine, meals, and refreshment. In the *Kamus Dewan*, it is defined as anything that is edible, such as rice, bread, and so on. According to the Arabic terminology, it is called

al-ta`am (plural *al-at`imah*) which is something taken by humans and other living beings as a necessity for survival.

The term foodstuff refers to the types of food that is generally eaten or determined to be eaten, the choice of types of food by an individual and others as defined by the Dewan Bahasa dan Pustaka. The five primary nutrient components are carbohydrates, fats, proteins, vitamins, and minerals. Rasulullah PBUH has detailed a correlation between foodstuff with *iman* (faith) and *takwa*, as well as the obligation to maintain foodstuffs in line with Islamic principles.

According to Riwayat Muslim, 1998:2, this hadith according to al-Nawawi (1972) is one of the important hadiths that contains within it the sources of primary laws in Islam. This hadith explains that the most important thing to evaluate in foodstuffs is the aspect of the relationship between humans and their God. Therefore al-Rāzi (2000), Ibn Kathīr (1999) and al-Alūsi (1994) (Wan Harun, 2015) assert that the strength to perform *soleh* deeds stems from food which is both halal and clean. Imam al-Ghazali says that halal foods increase the light of *iman* and allow for prayers to be answered while haram foods will lead to darkness in the heart. Meanwhile from the conventional concept of foodstuff, the “Malaysian Dietary Guidelines” from the National Coordinating Committee on Food and Nutrition (2010) emphasise practising a dietary style that only supports physical health.

Halālan from a literal standpoint comes from the word *halla*, meaning to unravel. For example, the term *halla al-`uqdah* means an unravelled tie (Ibn Manzūr, 2003). From a terminology standpoint, *halal* is explained by Abū Zuhrah (1987) to allow by the sharia and is unravelled from any restrictions towards it. Meanwhile, *tayyiban* refers to the state of being spiritually acceptable, clean, beneficial, without harm and without ambiguity (al-Zuhaili, 2002b; Ibn Kathīr, 1999; Ibn ‘Āshūr, 1984) (Wan Harun, 2015). The definition of halal was expanded from four (4) characteristics as determined by the Trade Descriptions Act (Use of Expression Halal) 1975 to seven (7) characteristics in the Trade Descriptions Act (Definition of Halal) 2011. The three (3) other characteristics added for halal foods require: i. Does not intoxicate according to sharia law; ii. Does not contain any part of a human body or its byproduct prohibited by sharia law. iii. Is not poisonous and does not pose a harm to one's health.

The halal status of a particular food is evaluated from four aspects which are: first, it is halal in procurement attained from halal sustenance whether it is allowed in Islam or not. Second, halal in terms of original matter/ingredients. Everything in this world is halal for consumption except for a few types and conditions of animals and plants prohibited in the Quran namely carcasses, blood, pork meat, animals slaughtered in the name of anything besides Allah, and animals which have been strangled, beaten, fallen, horned, or attacked by a wild animal unless it was able to be slaughtered before death. While plant products which are prohibited are *khamr*, or intoxicating (The Qur'an 5:3). Third, halal in the process of modification or innovation. In the process of altering it, it is not mixed with prohibited things or animals. Additional ingredients that are assimilated must be halal and processed in a clean manner and fulfil the proper food production procedure as well as the production process being guaranteed as halal syari'e. Fourth, halal in the aspect of the packaging process. The food must be packed with halal and clean materials. The storage process should follow the standards of sharie'. The criteria of *tayyiban* encapsulates food, which is of high quality and up to standards, not spoilt, not damaged, not poisonous, undisturbed and not contaminated with dangerous viruses/bacteria, and not fake. Food which contains nutrients which are useful to the body.

However, the current phenomenon in this area observes that the application of the term *halālan tayyiban* is no longer only focused on foodstuffs. The existence of these varied interpretations may lead to confusion over the real definition of the term *halālan tayyiban* as explained by the Islamic scholars. The lack of in-depth specific studies leads to unreliable definition by various invested parties. Malaysia still does not have a single specific legal provision or “Halal Act” to regulate activities relating to the use of the halal symbol, halal certification be it for food products, drinks, products, and services as well as items for Islamic use.

According to statistics from JAKIM, almost 80% of entrepreneurs in the food industry in Malaysia are non-Muslims. They dominate every aspect including the preparation, processing, and marketing of halal food products. The limited involvement of Muslim manufacturers causes Muslim consumers to be wary of the product. This is because the question of halal and haram involve complicated procedures and not just the aspect of cleanliness alone.

Innovation is to start or introduce something new. Most researchers agree that the definition of innovation include new products and processes. The process of innovation describes the change in the way an organisation produces a product and the company's end service (Cooper, 1998). Innovation is the suggestion to improve quality and to save on costs. This reflects that the use of innovative processes is recognised as being able to improve output efficiency, and the quality of the product made can also be innovated in the food industry. However, the extent to which this innovation can preserve the halal status of a given food is still under thorough study to protect consumers from ambiguous (*syubhah*) foods.

Among the innovations which are being intensely debated in the food and drug industry is the use of alcohol. Alcohol is another important solvent besides water (Joslyn, M. A., 1963). It is widely used as an additional flavouring agent in foods, such as cake, seafood, and the like. In the production of food flavourings, the ingredient known as essential oil is dissolved in alcohol to ensure that it last longer as well as to preserve its smell. Besides that, in the production of food products, such as cake it is usually spread or mixed in to produce a higher quality cake.

There are two types of uses for alcohol, either for internal use or external use. This is because there is a discrepancy towards these classifications when this ingredient is processed in the alcohol industry. Internal use or unnatured alcohol. “Unnatured alcohol” or “food drink alcohol” is an alcohol compound which is processed in the food industry without involving other additional ingredients to be used as a solvent in food products. It includes use as a drink ingredient or as a mixed ingredient. The *ijma'* (consensus) of ulama on the prohibition of drinking alcohol. The opinion of other ulama such as Hanafi, Maliki, Syafi'e and Hanbali agree that its position is equivalent to excrement such as blood. Medicines and perfumes that contain alcohol are permitted and forgiven according to the National Fatwa Committee (1984).

Besides that, it can add texture to processed food products such as beef and fish. Generally, these ingredients are widely used in the production of food products, such as fish balls, sausages, cheese, yoghurt, and so on. The commercial name for these types of products is surimi. The basis of surimi is made from fish meat. However, due to its low density, the fish meat is unable to solidify. Because of this inability, manufacturers combine it with consumable blood plasma protein made from blood supplied from slaughterhouses which is centrifuged to eliminate blood platelets which gives the blood its red colour. Asmak Ab Rahman (2009)

defined food security in Islam as sufficient access to halal and *tayyibah* food for every resident for a healthy and active life.

In this definition, he includes the elements of halal and *tayyibah* as heavily emphasised elements of food sources in Islam. Islam allows flexibility for its ummah when they are facing times of adversity when halal food is not available, they are allowed to eat foods which have been prohibited to preserve one's life. According to Musfirah Syahida (2015), food safety is a discipline which ensures the food is clean, safe, and free from any ingredients that are detrimental to one's health and environment, such as pathogens, poison, and waste products.

Tayyiban that promotes elements of "goodness" in food production encapsulating the aspects of cleanliness, safety, and quality. In fact, populations in many countries are not mindful of food safety. (M. Elmi, 2009). At present, food safety is still a critical global issue. This is due to various factors, among which are a lack of oversight in unsafe food production by authorities, and a lack of knowledge and awareness among food manufacturers (P. Seaman, 2008). Additionally, according to Siow Oi Nee, Norrakiah Abdullah Sani (2011), research in the field of food safety is underperformed in developing countries including Malaysia.

Islam also prioritises food security to a nation as per the policies implemented by the Prophet Yusuf A.S. emphasises halal elements in the food provided. The food that is offered must be safe, contain sufficient nutrients and must be halal. Islam clearly emphasises the halal aspect of food, however awareness of halal and safe food is rising in line with the increase of the global Muslim population.

To overcome these shortages in food supply, every country needs to have food security. Food security means every person at any time can acquire sufficient food to continue living in a healthy and active manner (FAO, 2009). Humans need sufficient food to achieve *the maqasid al-syari'ah*. Islam heavily emphasises that humans must preserve life, spirit, and body. On this topic, the aim of sharia to preserve life is seen as an important matter to prevent harm from coming to human life and so humans can obey the commands of Allah SWT. A country must have clear and suitable policies on food security because it is a basic need that is *daruriyyat*.

Study Highlights

Meaning of Innovation

Innovation has been a topic of discussion for many recently and has a certain standing in various fields and areas, including the food manufacturing sector. According to Kamus Dewan Bahasa dan Pustaka, 4th Edition, "innovation" is defined as something that has been newly introduced, such as a new method, system, or practice. It also means taking an action to create or start something new. The word innovation is also synonymous with renewal, change, revolution, new features and the like (*Kamus Dewan Edisi Keempat*).

According to the Ministry of Home Affairs (MOHA), innovation is defined as a method of creating a new or improved product or service through modification or improvement. It is synonymous with the result of creative and innovative ideas in improving the quality or productivity of a given affair. Therefore, it can be concluded that innovation is the result of creative and innovative ideas in improving the output or quality of a given product.

Innovation Development in The Food Industry

On the 25th of August 2022, the Ministry of Science, Technology, and Innovation (MOSTI) had announced a series of collaborations between academics and the industry which is the “Supercharger Series” lead by the agency under it, Malaysian Research Accelerator for Technology and Innovation (MRANTI), in an effort to accelerate the rate of Research, Development, Commercialisation and Innovation (R&D&C&I) in the country.

According to MOSTI, to increase its standing as a country with a good economy and is headed by innovation, Malaysia must ensure the safety of its research and development (R&D) translates to successful commercialisation. The government has set a goal to increase its Gross Domestic Expenditure on Research & Development (GERD) towards its Gross Domestic Product (GDP) from 1.04 per cent to 2.5 per cent under the Twelfth Malaysian Plan. At least 50 per cent of these R&D expenditures will be instructed towards experimental research development which is one of the primary conditions of advancing many more high-value industry-based products and solutions according to the needs of the country.

Innovation Factors in Food Products

According to Zaim & Hartini (2016), in food industry innovations, the types of innovation which is frequently done on food products is product innovation, then process innovation followed by marketing innovation. Besides that, studies done by Nor Hazana et. al (2010) in Batu Pahat found that the rate of innovation among SMEs is very high especially for new products, product improvement and operation improvement.

However, the higher the cost for the innovation process of a product, the less like it is for the innovation to be adapted (Tornatzky et. al, 1982). There are several factors preceding food innovation, among them are to ensure food security (Azian & Norkumala, 2022), product competition in the market the invention of new and quality products (Abu et. al, 2015).

Food Security

It is estimated that the Muslim population will rise to 2.2 billion by 2030 and at that time, the demand for halal food will be higher (Center, 2011). Following the recent issue of the war between Ukraine and Russia, the export of wheat from India to Malaysia was suspended due to low supply. Therefore, Malaysia must start to form new policies and strategies to ensure sustainable food supplies which are sufficient for Malaysian citizens.

Besides that, the issue of rising food prices in 2008 along with dwindling national rice reserves had pushed the government to resort to a sudden purchase through negotiation with the government of Thailand while other countries took measures to control the export of rice to protect their own interests (Chandra & Lontoh, 2010; Tengku Mohd Ariff, 2011).

Issues involving food security can cause other various social problems, such as migration, crime, protests, disturbances, and o war if it is not handled with care, as what happened in several countries in the continent of Africa, as well as Saudi Arabia, Philippines, Guinea, Mauritania, Mexico, Morocco, Senegal, Uzbekistan, Yemen and others.

Product Competition in The Market

The study done by Norhashimah et. al (2020) towards the potential of halal food product marketing among SMEs found that generally manufacturers hold a high perception towards the potential of SMEs to expand, however, they also perceive a large amount of challenge at the same time. The potential possessed by small enterprises is very high in expanding the halal industry, but the challenges they face are a lack of capital and knowledge of marketing strategies. Consequently, various agencies are focusing their efforts to help create more effective marketing strategies in keeping with the latest technologies and advances. Innovation of product packaging also aims to attract consumers in increasing the marketing of the product.

However, financial constraints as well as a lack of talent in high-level innovations are a factor in the slow and gradual innovations. According to a study by Suraiya et. al (2015) on the behaviour of small halal food firms in Malaysia in terms of innovation, manufacturers strive to expand the scope and variation from readily available products such as diversifying taste or flavourings, using semi-manual machines and implementing new processes. The ideas for innovations are sourced from either learned techniques or self-inventions. Besides learning new process innovations, they are also obtained from observing competitors or from trying to create something better than what competitors can offer.

The Issue of Halal in Food Innovation

The current technological revolution developments in the food industry leads to many consumers being in the dark of the status of a given food product and consumables, whether it is halal, haram, or ambiguous. On the authority of Abi Abdillah Nu'man bin Basyir, he states that he heard Rasulullah SAW say: "The halal is clear, and the haram is clear. However, between the two are unclear matters (*syubhah*) where it is unknown to many people." (Riwayat al-Bukhari and Muslim).

Studies show that the determination of an individual's choice of food based on quality and nutrition, halal and haram, cleanliness and the form of the food is influenced by factors of religion, culture, and lifestyle (Teguh Widido, 2013; Endang, 2010; Munyaradzi & Caly, 2012).

Halal Aspect in Food

"Halalan Tayyiban" is an important aspect considered by Muslims in every aspect of life including in matters of consumption such as food sources, in accordance with Allah's decree in the Quran which means: "O humanity! Eat from what is lawful and good on the earth. And do not follow Satan's footsteps. He is truly your sworn enemy." [2:168]

This verse clearly states that the aspects of halal and *tayyib* is for all people and not just Muslims. There are four (4) instances in the Quran where Allah has paired the aspects of "halal" and "*tayyib*", i.e. these two values cannot be separated in the aspect of food consumption. The evaluation of halal in all product consumption is not only viewed in terms of the fiqh, but also a scientific view as in cleanliness, safety, health, and quality as well as being properly handled i.e. with "*tayyib*" itself.

“Halal” according to Kamus Dewan 4th Edition is the decision of permitting a certain action to be performed, enabled, allowed, and justified. It is opposed to the decision of “haram” which is a prohibition (in Islam) where one is promised reward for those that abide by it and sin for those who disregard it.

In Malaysia, the enhancement of the halal industry is now rapidly developing in line with the aspiration of making the country the primary global halal hub. According to the Halal Management Division JAKIM, the Halal Hub has been expanded into two divisions which are the Malaysia Halal Council (MHM) Secretariat and the Halal Management Division (BPH). BPH will manage halal certification operations including product and premise certification document inspection, product and premise auditing, halal certificate approval, verification of overseas slaughterhouses, halal supervision and enforcement and halal analysis centres.

The evaluation of tayyib i.e. food that is good, safe, and quality is very subjective. JAKIM with the cooperation from JAIN has outlined several Malaysia Halal Standards among which is *Good Manufacturing Practices* (GMP). Most of the characteristics outlined in these halal and clean standards are taken from the Quran where there has been comprehensive examination on the handling, processing, packaging, use of equipment, storage including transport, where the above is considered as aspects of “*from farm to table*”.

One example of the latest halal issue in innovated food is cultured meat, food which has been genetically modified i.e. food which contained foreign genetic material. Besides that, gelatine which is an additive which serves as an emulsifier, food thickener and stabiliser. It is a protein-based ingredient which can be obtained from animal bone, cartilage, tendons, and skin.

***Maqasid al-daruriyyah* In Usage of Innovated Foods**

Definition of *Maqasid al-daruriyyah*

Maqasid can be divided into three main aspects which are *maqasid al-daruriyyah*, *al-hajiyat*, and *al-tahsiniyat*. In discussing aspects of this study and *maqasid al-daruriyyah*, it relates closely with the objective of protecting the three concepts that must be given focus namely protecting the religion, life, and intellect. Subsequently, in line with the gradual change in food innovation, the need to protect human health is an aspect that must become a main priority to protect the religion of an individual, intellectual and safety of lives in consuming any type of food. To fulfil this obligation, halal food innovation is a starting point to fulfil the concept of *maqasid al-daruriyyah* itself.

Practice of the concept of *Maqasid al-daruriyyah* in Usage of Innovated Food

According to Suraiya Ishak et.al (2015), foodstuff innovation can be divided into six parts. Among them are product innovation, process innovation, equipment or machinery innovation, packaging innovation, marketing innovation and market innovation. Halal food innovation involves the development of food products that fulfil the halal standards in its production. The

following are a few examples of halal food innovation which are being developed.

First, the use of alternative ingredients: Expansion of alternative ingredients, such as plant and microbe-based as substitutions for animal-based ingredients which are not halal in food. Second, food processing technology which is the development of halal food processing technology, such as ultrasound processing technology or plasma processing technology which eliminate bacteria in food without destroying the nutritional content. Third, application of halal certification which is to assert the application of halal certification for food products created by producers, until the final product confirmed as halal. Fourth, the use of natural ingredients by using natural ingredients in the development of halal food products, such as natural preservatives and natural colouring agents which are taken from plant-based sources.

Fifth, the development of halal food products for patients who are experiencing illness. In other words, the development of halal food products specialised for patients who are undergoing an illness and require specific nutritional intake in undergoing their treatment. Sixth, the development of practical food packaging. The development of food packages which are practical and flexible to suit halal principles, such as fast food, snacks, or energy drinks. Lastly, the development of functional halal foods. The development of functional halal foods which contain nutrients and natural ingredients which are beneficial for physical health as well as fulfilling halal standards in its production.

Study Methodology

Study methodology is an important aspect which plays a large role in determining the validity of a study which is being conducted as well as creating an output which is accurate to the main objective of a study. This study used several methods which are suitable for the study. The methodology used for this study is semi-structured interviews. This study is a combination of a qualitative and quantitative study.

For the purposes of obtaining more accurate and significant data, several locations were used to ensure more accurate study material. Thus, the opportunity to conduct interviews with several parties such as MARDI and UPM is taken in entirety. There were government and private agencies that were involved in the process of data gathering from various agencies and locations. Interviews are an important data gathering technique in research based on case studies because the feedback received from the participants of the showcase the uniqueness in the perspective of the study being conducted. (Hatch, 2002; Merriam, 1998; Stake, 1995; Yin, 2009).

The questions that are asked must be closely related to the topic of research. Among the questions asked are first, are there issues of doubt about the halal status among consumers. Second, as we are aware, Malaysian citizens are very mindful about the halal status. How far will manufacturers go to ensure that the given product is certified halal. Third, if the imported sources are from overseas, will the manufacturers perform an inspection evaluation process on the main farms and headquarters for the traceability process. These are some of the questions which were able to be asked in interviews with the sectors related to the halal industry.

To achieve the objective of this study which is to determine the level of food innovation as well as its perspective from the aspect of *maqasid al-daruriyyah*, qualitative and quantitative

methods were used to obtain the data of the study. Among the sources of study data are from the relevant and suitable online literature, newspaper references, printed sources, such as books, articles, journals, and explanatory pamphlets. This method of data gathering is used to obtain information and data which is suitable for the study which is being conducted. To obtain the data, the writer focused more on analysis and the interview method. These study methods are suitable to obtain the required data and information.

Study Findings

The researchers used a structured interview method and references from several authentic sources to obtain the information and data to achieve the objective of the study. Structured interview is the method used in this study. At the same time, the use of the ATLAS.ti v23 system also aided the researchers in achieving the objective of this study in a quicker and more detailed manner. Table 1 below shows the full details for the results of the interview conducted.

Table 1 Full details for the five main aspects of maqasid.

Theme	Sub-theme
Protection of mind (<i>Hifz Aql</i>)	Ensuring the food has the status of halal Reducing costs of food production
Protection of property (<i>Hifz Mal</i>)	Visual, test & smell Reducing imported ingredients Physical health
Protection of life (<i>Hifz Nafs</i>)	Safe study on Humans Nutrients of local ingredients

For the first sub-theme, in ensuring that the food has the halal status, status evaluation and halal recognition conditions on raw ingredients must be conducted. At the same time, hotel managements must be confident that there are no questionable food ingredients allowed on to the premises. For the second sub-theme, a switch to an online copy system will help hotel authorities register and substitute the raw ingredients to be used. This indirectly allows transportation and printing costs to be reduced. Besides that, the use of dry paddy can also be encouraged seeing that it is able to save on space costs. For the third sub-theme, hotel management parties will also change the fixed menu with the quantity of the ingredients obtained according to the current demand. For the fourth sub-theme, MARDI has increased efforts to develop local paddy which is more suited to the climate in Malaysia.

The fifth sub-theme focused on the five best alternatives for physical health such as the consumption of pineapple which proves that eating pineapple can expedite the healing process. Pineapple also has the potential to reduce cholesterol in the body. The discovery of plants such as the golden eggplant from Sarawak is also found to have lots of nutrients for the body such as allowing for weight loss as well as being able to be commercialised as a cooking ingredient commonly used in “asam pedas” dish. Pineapple can reduce inflammation and irritation on the body.

Studies conducted on athletes also proved that consuming pineapple could expedite the healing process. This study is also supported by data and scientific studies on children and the elderly.

The sixth sub-theme found that MARDI in conducting tests on animals is also able to produce a study on food that is high quality safe for humans. The last sub-theme is that the use of local ingredients is safer such as the use of a local fruit, namely mangosteen. Mangosteen skin is innovated to create a product which is abundant in nutrients and taste good.

Next, the findings obtained from using the semi-structured interview method is to create a study that is clear and detailed. This is because the references from articles, journals, and past studies form the basis of a study for which its validity is verifiable. In fact, the filtering of the reference materials can ensure that the source of the references is of good quality and reliable. Online references from the *Google Scholar* and *Research Gate* websites indirectly enable researchers and readers to refer to and delve into the articles shared on the internet.

Conclusion

In conclusion, the objective of this study was achieved in finding that food innovation in Malaysia must progress in line with applying the concept of *maqasid al-daruriyyah* to ensure that the innovations performed do not contradict the concepts of halal and *tayyib* which rely on the Quran and hadith.

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