

The Framework of Food Security and The Food Security Ecosystem: Tawhidi Perspective

Farda Hasun^a, Hendri Tanjung^{b,1,*}, Sudarso Kaderi Wiryono^c, Masudul Alam Choudhury^d

^a Faculty of Industrial Engineering, Telkom University, Indonesia

^b Faculty of Islamic Studies, Ibn Khaldun University, Indonesia

^c School of Business and Management, Institut Teknologi Bandung, Indonesia

^d Islamic Economics and Finance, Trisakti University, Indonesia

¹ hendri.tanjung@uika-bogor.ac.id

* corresponding author.

ARTICLE INFO

Article history

Received June 25, 2020

Revised August 10, 2020

Accepted November 13, 2020

Keywords:

Food Security Framework

Food Security Ecosystem

Tawhidi

Sustainability

ABSTRACT

The world is facing an increasing number of people who suffer from hunger, which could be worse because of unpredictable future of Covid-19. The question is how to improve the food security level of the world countries. This paper aims to develop the concept of food security, the food security framework and the food security ecosystem using Tawhidi methodology. Based on Tawhidi methodology, a problem and its solution are defined in the frame of Tawhidi world view, that is Qur'anic verses and/or sunnah of Rasulullah Muhammad PBUH as the transmission mechanism and explanation of Qur'anic verses, and/or the lower sources of Islamic knowledge. The study shows that special attention to the poor household and micro-firms, together with moderate-halal-thoyyib consumption - with encouragement to consume local product, efficient production without harming the environment at adequate capacity to produce quality products, encouraging the market operates based on market mechanism, prohibiting riba-based financing and defining the clear role of the government are clear strategy of Islam to achieve food security. The framework of food security and the food security ecosystem resulted from this study are expected to give another perspective used by stakeholders to find the solution of food security problems.

This is an open access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



1. Introduction

One of very basic human physical need is food. A theoretical framework for food policy formulation, planning and implementation is provided by the concept of food security (Oshaug, et al., 1994). According to Food and Agriculture Organization, food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996).

There are some indexes that can describe the food security condition in countries. One of them is Global Hunger Index, published by Concern Worldwide and Welthungerhilfe. The Indonesian score of Global Hunger Index was 21.9 in 2018 and 20.1 in 2019, that put Indonesia in serious hunger situation. In 2020, the index is 19.10, that means Indonesia is in moderate hunger, a better situation than the previous years (Grebmer, et.al., 2018; 2019; 2020). The other report about Indonesian food security condition can be seen in Food Security and Vulnerability Atlas of Indonesia. The Atlas reported that, in 2019, there were 71 of 416 districts (17%) and 5 of 98 cities (5%) which categorized as food vulnerable areas (Badan Ketahanan Pangan, 2019; Nirwandar, 2020; Wahyono and Razak,

2020). In its report about the Indonesian situation of food security and nutrition, the Badan Ketahanan Pangan or Food Security Body reported that the prevalence of undernourishment in Indonesia is 7.66% in 2019, lower than 10.73% in 2015 (Badan Ketahanan Pangan, 2019a; Abdel wahhab et al., 2020; Datucali and Sali, 2020). Although the prevalence of undernourishment tends to decrease, it can be seen that millions of Indonesian people are still undernourished, and there is a need to improve the food security level of Indonesia.

At the global level, the data from United Nations shows that the number of people suffer from hunger tends to increase slowly after 2014. It is estimated that 25.9% of global population, or 2 billion people, were affected by moderate or severe food insecurity in 2019, increased from 22.4% in 2014. In 2019, there were 750 million people in severe food insecurity. Severe food insecurity is a condition when there is a tend to run out of food, and at worst, go a day, or days, without eating. Covid-19 causes up to 132 million more people in 2020 may suffer from undernourished (United Nations, 2020; Maryati, 2020).

Based on all of the data in the previous paragraphs, the main question emerged is how to improve the food security level of countries. The answer for this question becomes more important when the trends related with food production and consumption, such as population growth, land conversion for other functions, and climate change, are considered. To answer the question, it is necessary to understand the structure and the behavior of food security phenomena, so proper intervention can be accomplished to have expected behavior, that is the improved food security level. According to Choudhury (1993), when analysis is done in the context of sustainable development, moral and ethical considerations must be endogenously adopted. When moral and ethical values are considered, and when there is quest about socioeconomic problems, it is necessary to remind that there are differences in perceptions about them in different societies.

Tawhidi methodology is a methodology based on Qur'anic worldview. Tawhid is the belief on oneness of Allah. It is the foundation of Islamic belief. The belief of oneness of Allah has consequence of believing that Al Qur'an is the Book from Allah, and it is the reference point of a comprehensive worldview of life and its organization in a functional way. ***Qur'an is the domain of complete (QS 18:109), absolute (QS 2:2), and perfect (QS 4:82) knowledge.*** Based on those characteristics, a distinct methodology in epistemology and ontology can be developed. Tawhid as the Qur'anic worldview comprehends the entire construct of knowledge, including the knowledge about food security (Choudhury, 2013; 2016).

The development of food security concept from Islamic perspective has been done. One important work is an article written by Haddad (2012) who wrote about Qur'anic verses related with food security. However, Haddad did not describe the building block built by the Tawhidi guidance so everybody can understand the picture of the whole system which affecting food security, something that is very important in designing the food security policies, strategies and actions. It is very intriguing to continue the job of Haddad (2012) and explore further how is Tawhidi perspective can contribute to food security concept and efforts to achieve food security.

The aims of this paper are developing the concept of food security, developing the food security framework and developing the food security ecosystem from Tawhidi perspective. This paper will be started from explanation about Tawhidi methodology, which followed by the result and discussion. The literatures that are explored in this paper to achieve the aims of the study are literatures that can explain, from Tawhidi perspective, how to fulfill the food need for all of society, or, in other words, that can explain how to make food supply – with specific criteria from Tawhidi perspective - meets food demand, and how to make food accessible physically and economically for all citizen. The literatures used in this paper are Islamic sustainability, Islamic production, Islamic consumption, Islamic market and price theory, Islamic distribution, Islamic social financing and previous articles and documents about food security both from Islamic and occident perspectives. The Islamic sustainability will be described in sub-section 3.1, together with the definition of sustainability from Tawhidi perspective. The next sub-section explains the significance of food security issue from Tawhidi perspective and the definition of food security from Tawhidi perspective. The next sub-sections explain briefly the literatures about production, consumption, market and

price, distribution and financing from Tawhidi perspective, before explaining the framework of food security and the food security ecosystem which are developed from those sources.

2. Tawhidi Methodology

As stated previously, Tawhidi methodology is a methodology based on Qur'anic worldview, which comprehends the entire construct of knowledge. It starts from the Qur'an as the source of knowledge as the fundamental epistemology, which is transmitted into reality by the guidance of Muhammad the Messenger, called sunnah (QS 42:52, 33:21), continued by the derivation of knowledge related with specific issues through the combination of tasbih and shura process, or shuratic process (Choudhury, 2013). Tasbih is the conscious reflection of issues under discourse (Choudhury, 2019, p46). By doing tasbih, individuals clean his mind to be ready to learn and recognize the signs of Allah greatness. There is no perfect individual, therefore individual conscious reflection process or tasbih needs pair in the form of participation in collective discourse, or shura, to improve the quality of knowledge. Shura is a collective discourse to gain consensus on problems and issues under consideration (Choudhury, 2013, p20). There is interaction between individuals in shura process, which is followed by integration of preferences as consensus formation in decision making. Interaction which is followed by integration shows the dynamic induction of preferences with the episteme of Tawhidi principle of unity of knowledge (Choudhury, 2019).

Based on Tawhidi methodology, a problem and its solution are defined in the frame of Qur'anic verses and/or sunnah of Rasulullah Muhammad PBUH as the transmission mechanism and explanation of Qur'anic verses, and/or the lower sources of Islamic knowledge. Therefore, to define food security concept from Tawhidi perspective, the first step is exploring the relevant guidance from those sources, by doing literature study, and then use it to define the framework of the system. From this framework, the food security ecosystem can be developed.

3. Results and Discussion

3.1. Sustainability from Tawhidi Perspective

Sustainability literatures are explored to find the guidance about sustainability concept in Islam in order to put the sustainability of the humankind into consideration in developing food security concepts.

By mid 1990s, there are over 100 definitions about sustainability (Elkington, 1998 cited in Marshall and Toffel, 2005). Some definitions are:

1. Ability to maintain or increase well-being over time (McMahon and Mrozek, 1997)
2. Capability of being continued with minimal long-term effect on the environment (ahdictionary.com, 2018)
3. Capacity for continuance into the long-term future or the ideal dynamic state (Lozaro, 2008)
4. Sustainability is ability of development to continue over time indefinitely (Hasan, 2007)
5. Continuity of justice, balance, moral, ethical, and material acquisitions that together configure the human social order, markets, institutions and the global political economy (Choudhury, et.al, 2008).

From Islamic perspective, Allah is the creator and absolute owner of the universe, and humankind is a trustee (khalifah) of the earth. This trust must be executed in a way that is compliant to Qur'an and Sunnah of Muhammad PBUH. Because the universe is created with accurate measurement, Allah provides *enough* resources for humanity in the earth, as long as it is managed wisely. Qur'an reminds human not to danger the environment (QS 7:56). Mischief on the environment will backfire on the human being, as written in QS 30:41. Social sustainability in Islamic perspective is constructed based on QS 49:13, in which Allah stated that human is created from a man and a woman to live collectively in tribes and nations to know each other, and the best among them is the most pious to Allah the Almighty. The economics sustainability in Islamic perspective is constructed based on: 1) Islam promotes development and growth socially and economically, 2) Islam prohibits poverty, and provides waqf and zakat for socio-economic improvement, 3) From sustainability angle, economic

development is “a process of utilizing natural resources at a specified level for human well-being needs”, which must be guided by high morale and Islamic esteem (Sarkawi, et al., 2016).

According to Hasan (2007), economic growth is important and cannot be ignored, but it needs to be accompanied with the other factors as the objectives of development, because economic growth does not automatically come together with full employment, stability and equity in distribution. According to Islam, in addition to growth, there is fulfillment of basic need of all members of the community as a social imperative. Rapid economic growth by giving priority for the fulfillment of basic needs and avoidance of wasteful expenditure, accompanied by the insistence of shariah values to the next generations to ensure inter-generational equity in the distribution of wealth and prosperity, resources conservations, and sustenance of the environment are imperative to move to the achievement of maqasid shariah (Hasan, 2007).

From previous paragraphs, it can be stated that sustainability can be viewed from the objective of the creation of human being. QS 51:56, “And I did not create the jinn and mankind except to worship Me” stated clearly the objective of human creation, that is to worship Allah. In addition, from Tafseer Ibn Katsir, in QS 2:30: “Verily, I am going to place a Khalifah on earth”, meaning people reproducing generation after generation, century after century, just as Allah said in QS 6:165, “And it is He Who has made you (Khalaf) generations coming after generations, replacing each other on the earth”. In QS 43:60, “And if it were Our will, We would have (destroyed you (mankind all, and) made angels to replace you (Yakhlufun) on the earth”. From all of the verses, Allah was not referring to Adam specifically as Khalifah, but all the mankind (Tafseer Ibn Katsir). As Khalifah on earth, the human being is entrusted to prosper the earth generations after generations until the end of the day. This trust must be fulfilled continuously.

This research concludes that the continuity of fulfilment of Khalifah function of humankind who entrusted to prosper the earth in the frame of worshipping Allah is the very ontological definition of sustainability. To maintain the sustainability of the humankind, Allah provides sufficient resources (QS 41:10) and sent the guidance about how the people should act in their life, through His Messengers (QS 4:170). There is no doubt that ***sustainability of the humankind can only be achieved by following the guidance from Allah***, the Creator of this world, which – for the people of the last days - is written in the Qur’an as the source of complete, absolute and perfect knowledge, that transmitted into reality by the Sunnah of Rasulullah Muhammad PBUH. With its unity of knowledge characteristic, Tawhidi gives a wholistic guidance to achieve sustainability.

3.2. Food Security Significance and Food Security Concept from Tawhidi Perspective

As written in the first paragraph, according to FAO, food security exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life. There are four dimensions of food security defined by FAO: availability, food access, utilization and stability (FAO, 2006). Consistent with sustainability achievement from Islamic perspective, there are two questions: 1) Is food security an important matter from Tawhidi perspective, and, 2) How the concept of food security from Tawhidi perspective? This research answers both questions in the next paragraphs.

Allah ordain people to feed the poor (QS 74:44, 90:12-14), or to encourage the people to feed the poor (QS 69:34). In QS 69:34, Qur’an describes about the punishment for people who did not encourage the others to feed the poor. Qardawi (2002) explains that this verse (and also QS 89:18, 107:3) is the foundation for the obligation of the society to work together to fulfill basic need of the people, including ***food***, cloth, housing, education, and other things which considered as basic needs. Thus, ***food security is important issue from Tawhidi perspective, and it has to be realized to achieve sustainability in a sustainable way*** – that is the way which is not conflicting with Allah’s rule.

In section 3.1., it can be identified that the objective of the creation of human being as stated in QS 51:56 is to worship Allah. Worshipping Allah has consequence to follow the guidance from Allah. As stated before, QS 74:44, QS 90:12-14, QS 69:34, QS 89:18 and QS 107:3 are the verses in which Allah teaches the society to give food or to encourage the people to give food to the needy. In addition, QS 11:6 stated that Allah gives bounties, including food, freely to all creatures, and QS

41:10 stated that there is sufficient sustenance for all. Thus, everybody has the right to food, and therefore, food security from national level to individual level is the task of all society, including individuals and state, and must be a priority of the society, because it is an ordain from Allah. And because there are verses which tell humankind to eat only halal and thoyyib food, halal and thoyyib must be taken into account in food security concept from Islamic perspective. Thus, there must be enough halal and thoyyib food for all people. The next point, the objective of human creation is worshipping Allah, thus the ultimate objective of food security is supporting people to worship Allah. Therefore, food security in this paper is defined as ***a situation when the right to halal and thoyyib food of everybody is fulfilled so nobody is hampered to worship Allah because of hunger***. This definition consists of three dimensions: 1) Availability, means there is adequate supply of halal and thoyyib food, 2) Accessibility, means that everybody has proper access to food – physically and economically, 3) Utilization: everybody has to consume halal and thoyyib food.

3.3. Food Security Framework from Tawhidi Perspective

To fulfill the right to food for every people, there must be adequacy of food supply or matched between supply and demand. From supply side, QS 67:15 and QS 62:10 gives a guidance to utilize resources as well as possible to produce enough food for all population to liberate ummah from dependency. Therefore, country like Indonesia with abundant resources to grow food should focus on effort to have food independence.

3.3.1. Production from Tawhidi Perspective

From the point of production urgency, Umar bin Khatab RA, the second Caliph, considers production as a form of jihad fi sabilillah. Ath-Thabrani narrated in Al-Mu'jam Al-Ausath book 4 page 284, hadits number 4214: "...Know it, if he works for his parents or one of his parents, it means he does jihad. If he works to fulfil his family needs, it means he does jihad. And if he works for himself, it means he does jihad". Umar bin Khatab RA called the Moslems to improve their economy by doing productive activities. In other narration, Umar bin Khatab RA said that ignorance in earning for living worries him more than poverty. In addition, Umar RA himself doing the production activities, and he always ask about the market condition in Friday prayers. Umar also gave support to people who wanted to do productive activities, e.g. by giving useful information. In the level of ummah, producing something which liberates ummah from dependency is a collective obligation (Al-Haritsi, 2006).

There are principles which need to be remembered in doing production activities. **The first** is sharia principle, that consists of aqidah, 'ilm and amal. From the aqidah aspects, all activities, including economic activities such as production, is a worship to Allah if it is accomplished sincerely, and the result of those activities are depended on Allah's decision. From 'ilm aspect, every actor in economic activities need to understand about sharia rules. Umar RA prohibited people who does not understand about sharia from trading in the markets. The next aspect is amal, that relates with quality matters. Product quality is very important, based on QS 67:2 and also hadith which stated that Allah loves anybody who emphasize about the quality in doing jobs. There are many narrations that Umar RA call the people to improve the quality of food production process, and in other narrations, Umar got off from his horse to teach women in detail to make bread in a better way. The quality of production and also all economic activities must follow shariah rules: not produce haram products and not do haram transactions. In addition to following the sharia rules, the production quality also needs to consider the relevant world sciences. **The second** principle is akhlaq. Every actor in economic activities need to have good akhlaq (behavior) and the important principle of akhlaq in economic is prohibition to give mudharat to the others. In addition, the intention of producers has to fulfill the need of people (society). **The third** principle in production is production priority, which does not only consider the needs and wants of the wealthy people who has more purchasing power, but also consider the urgency in achieving sharia objectives. Umar RA's development politics gave priority to handle poverty and produced more basic needs for the society. Umar RA also was very concern to remind the producers to give attention to production priority. The instruments used are permit mechanism, government decree, change of ushur rate to increase or decrease import of a commodity.

One function of government is to educate producers and also traders. There are many narrations telling about this activity (Al-Haritsi, 2006).

There are four elements in production: work, management, land and capital. These elements are defined based on how Umar RA valued the contribution of these activities to determine profit sharing from productions. Work in this term refers to every beneficial and sharia compliant activities which be performed to produce goods and services and might be rewarded by salary or other production rights. These activities could be physical and non-physical activities. Umar RA also highlight about specialization of work. The next element of production is management. Based on the examples in Umar RA era, there is a differentiation between work and management, that can be seen in waqf, mudharabah and muzara'ah. Generally defined, management is the activity of making decisions related with production activities and risk bearing. The third element of production is natural resources, which is defined as all items on or in the earth created by Allah, which can used by human to produce goods and services to fulfill their need. The last component is capital, which may not be raised in a haram way (Al-Haritsi, 2006).

3.3.2. Consumption from Tawhidi Perspective

Consumption must be perceived as a way to fulfill the objective of human creation, that is worshipping Allah. If consumption is only a way to strengthen an individual to worship Allah, a Moslem individual will not give attention to this way more than it should be. Qanaah is a very important behavior to prevent people to be greedy and do something haram to get what he consumes. In addition, people should understand the shariah rules related with what he consumes (Al-Haritsi, 2006).

In the Qur'an, there are some verses that guide the consumption pattern. In QS 7:31, Allah told humankind to eat and drink, but not excessively. The other verses told humankind to eat halal and thoyyib products (QS 2: 168, 5:88, 16:114). In Indonesian Halal Assurance Act, a halal product is defined as a product that has been declared halal in accordance with Shariah rules / principles (UU Jaminan Produk Halal 2014). When collaborated with halal context, thoyyib has special meaning. The term thoyyib has the meaning of everything that is considered good by the physical and the soul or anything that does not contains reprehensible and repulsive elements. Thoyyib means that food products must be high nutritious, safe, proportional or not exaggerated and also must heed ethics of eat and drink in consume it and how to get it (Kamal, 2018). The other hadits about food: "I heard the Messenger of Allah PBUH say: 'A human being fills no worse vessel than his stomach. It is sufficient for a human being to eat a few mouthfuls to keep his spine straight...'" (Sunan Ibn Majah 3349).

There are three levels of needs (Al Ghazali; Asy-Syatibi cited in Al-Haritsi, 2006). Primary needs are the needs that must be fulfilled to uphold religious and world maslahah and without them the condition will not be stable and somebody will not be safe from destruction. Secondary needs are the needs which without them narrowness in life will happen, but not as narrow as the consequence of the absence of primary needs. Tertiary needs are needs which are not primary or secondary, but only complementary to those needs and are ornamental in life.

In his era, Umar RA focused on efforts to fulfill basic needs for the people. He was very enthusiastic to fulfill proper consumption level for every individual and set the sufficient level of food for the poor which be sent monthly. He encouraged the people to work to fulfill his family needs, as ordained in QS 2:233, and gave sanctions to the owners of slaves who did not give enough food for their slaves (Al-Haritsi, 2006).

The other guidance about consumption is about being care to the others. Rasulullah PBUH said: "Let no one be full, while his neighbor is starving" (Hadits narrated by Thabrani in Mu'jam al Kabir 12/154). Rasulullah Muhammad PBUH also said: "Start from yourself. When there is surplus, that is for your family. Then, if there is surplus, it is for your relatives. If there is surplus, thus, and thus" (Hadith Shahih Muslim no. 997). The other guidance on consumption is the encouragement for local product consumption, eat what is nearer to you, as narrated in this hadis: "Who was the son of Um Salama, the wife of the Prophet: Once I ate a meal with Allah's Messenger PBUH and I was eating

from all sides of the dish. So, Allah's Messenger PBUH said to me, "Eat of the dish what is nearer to you" (Sahih al Bukhari 5377).

Being excessive in consumption is prohibited based on QS 7:31. QS 25:67 told that the best way of consumption is not excessive or sparingly, but are ever, between that, just moderate. The excessive consumption could influence the behavior, health, social and economic aspects of humankind, and it is warned in QS 23:64 and QS 28:58 about the effect of excessive consumption: the destruction of the land and the nation. Therefore, it is necessary to control the consumption. On the other hand, Allah is happy when His Bless can be seen as written in a hadits narrated by At Tirmizi. The other guidance about consumption is as written in QS 65:7, spending follows the income (Al-Haritsi, 2006).

3.3.3. Market from Tawhidi Perspective

Upholding justice is one ordain of Allah. According to Ibn al-Qayyim al Jawziyya, shariah is God's justice and mercy amongst His people (Deuraseh, 2012 cited in Adada, 2019). Justice is defined as giving to everyone his due on the basis of equity (Ansari, 2008 cited in Adada, 2019). Justice is an absolutely indispensable ingredient of the maqāṣid al-Sharī'ah, so far so that it is impossible to conceive of an ideal Muslim society where justice has not been established (Chapra, 1992 cited in Adada, 2019). Justice relates with four aspects: social relations, the process and enforcement of the law, economic administration and political administration. The administration of economic justice is important to the Islamic market doctrine (Adada, 2019).

The importance of market in human life is described in the QS 25:7 and QS 25:20, by describing the Prophets as people who walked in markets. One of the first thing that accomplished by Rasulullah PBUH is appointing a place for setting up a market. This is a proof of the importance of market in the society from the Islamic perspective. Market is a place of exchange for individuals, who, by their nature, are created with severe love for wealth (QS 3:14). Therefore, Islam places moral and regulation on the freedom of the market, which is an integral duty of the state. According to Qardawi (2001, cited in Adada 2019), Islamic market permits any trade except that which involves injustice, cheating, making exorbitant profit and the promotion of something haram. Islamic market is organized in a way that promises fair outcomes to participants if allowed to function without manipulations (Adada, 2019).

There are unlawful acts in Islamic markets. Some of them are:

1. Najasy. Najasy occurs when a person offers a bid merely to incite another needy buyer into paying a higher price (Hadits Bukhari no. 2150 and Muslim no.1515). Najasy occurs when a producer or a buyer creates fake demand to increase the price (Karim and Sahroni, 2015)
2. Hoarding. Hoarding occurs when a supplier restricts supply to the market, by hiding what should be delivered for sale, in order to make extra gains (Adada, 2019; Karim and Sahroni, 2015). Economic term for ihtikar is monopoly rent-seeking (Karim and Sahroni, 2015)
3. Forestalling, that is the interception of goods before they reach the markets. It is narrated from Abu Hurayrah that the Prophet said: "Do not meet the traders on the way, and whoever meets any of them and buys from him, the vendor has the choice of annulling the transaction when he comes to the marketplace." (Sunan Ibn Majah, Hadith No. 2178). The other hadits is quoted next: "Do not meet the traders on the way. A person should not enter into a transaction when his brother is already making a transaction, and do not compete on price, and the townsman should not sell for a man from the desert" (Hadits Muslim no. 3886).

As explained previously, Islam places moral and regulation on the freedom of the market, so hisbah is necessary. Hisbah means ordering goodness when there is somebody leaving it and prohibiting badness when there is somebody doing it. This is such a control act in communities. Control in socio-economic activities from Islamic perspective is done by state and individuals. Individuals doing self-control on their activities because they believe that Allah knows everything and nothing will be discarded in judgement day. Besides internal control, there is external control. External control can be done by state to people or vice versa. The state has to guarantee the freedom to enter into and exit from markets, supervise how the traders doing promotion, ensuring that no hoarding activities in the markets, supervise trade intermediaries, supervises of pricing process, and also supervises import (Al-Haritsi, 2006).

3.3.4. Islamic Price Theory

Concepts of demand and supply are most fundamental in economics, they are the essence of market mechanism. Ibn Taimiyah (1263-1328 CE/661-728AH) in the early of thirteenth century wrote a concept of market mechanism. According to Ibn Taimiyah (1381, cited in Islahi, 1985), rise and fall in prices is not always due to injustice (zulm) of some people. The cause could be inadequacy in production or decrease in import of the goods in demand. To express demand, Ibn Taimiyah used the term desires, or taste, one important determinant of demand. Ibn Taimiyah combines two different changes, supply and demand, in one. He stated that when availability decrease and desires increase, the price will increase, and vice versa. In his book *al Hisbah fi'l Islam*, Ibn Taimiyah describes the two changes separately, as can be seen in the next quote: "If people are selling their goods according to commonly accepted manner without any injustice on their part and the price rises due to decrease of the commodity (qillat al shai') or due to increase in population (kathrat al Khalq), then this is due to Allah" (Ibn Taimiyah, 1976, p.24, cited in Islahi, 1985).

Ibn Taimiyah has distinguished between an increase in price which is caused by market forces and increase of price which is caused by people's injustice such as hoarding - a distinction that provides a ground for price regulation by authorities. Ibn Taimiyah is a strong supporter of price control in case of market failure, and against price control when price increase was caused by market forces (Islahi, 1985).

Cost is important in determining the price. Ibn Khaldun (d.1406, cited in Adada, 2019) gave historical proof of the role of the cost in pricing. The cities had higher food prices than the desert regions because of levies on foods in the market and at the city gates. The suppliers then transferred the burden of these levies to customers and charged higher prices (Adada, 2019).

Abu Yusuf (d. 798) stated that there is no definite limit of cheapness and expensiveness and that prices are subject to command and decision of Allah (Islahi, 2005 cited in Adada, 2019). Traders must not seek to broaden the gap between the two prices – the basic price or cost per unit and the prevailing price or the price in the market - and take larger profits through immoral means such as dishonesty and profiteering (Adada, 2019).

Price fixation is an injustice. Whatever price that emerges from the market, under normal conditions (i.e. conformity with the ethic of market behavior), must be harmonious with the ideals of justice. This price must not unfairly favor either the buyer or the seller, and both must willingly agree with it as the correct valuation of the commodity in question (Adada, 2019). This statement roots from the hadiths about pricing, as quoted below.

The people said: Messenger of Allah, prices have shot up, so fix prices for us. Thereupon the Messenger of Allah said: Allah is the one Who fixes prices, Who withholds, gives lavishly and provides, and I hope that when I meet Allah, none of you will have any claim on me for an injustice regarding blood or property (Sunan Abi Dawood, Vol. IV, Hadith No. 3451).

Islamic scholars have different opinions about price fixation. Most of them have views that price fixation is prohibited. The second group said that price fixation is allowed when there is a need on it. Rasulullah PBUH rejected to fix the price, as narrated in the quoted hadiths, because at that time the price was increased as the consequence of supply and demand fluctuation (Al-Haritsi, 2006). Based on his study, Bashar (1997) concluded that there are extreme and moderate views for and against price control. All schools of fiqh agree that under imperfect conditions such as hoarding or other frauds, or when individuals cannot safeguard their interests, price control is permissible. Some scholars have opinions that even in normal times, price fixation is allowed with consultations and mutual consent. Therefore, although price control is not common in an Islamic economy, selective price controls are permissible if the situation needs it, that is when market mechanism fails, by considering the costs associated with its implementation (Bashar, 1997).

3.3.5. Islamic Distribution Model

Distribution in Islam discusses about how to organize ownership of production factors and economic resources and also income distribution. Three aspects need to be understood in Islamic distribution

system are ownership management, income distribution and income redistribution (Al-Haritsi, 2006).

Ownership management covers system to determine the amount of resources from earth - such as land, mining goods - which can be owned, and to determine the principles to utilize that ownership. Earth is the most important production factor and must be explored in a way that can realize fairness in distribution. Considering the fairness in distribution with future generation, Umar RA rejected to distribute the land between conquerors. Umar RA gave time three years for abandoned land. If in that range of time the land is not used or planted, the ownership of the land will be transferred to the people who use or plant it. Land was given to people who needs it based on the size of the family. In addition, Rasulullah said that Moslem confederate in water, grass and fire. Umar RA ordered the governors to dig the well when it was considered as necessary (Al-Haritsi, 2006).

Ahmad (1984) discussed about two mainstreams school of thought about distribution of wealth to show that there are varying approaches to the problem of economic inequality. The first is the opinion that inequality is an integral part of divine design as a test in life. Therefore, it is not necessary to call for artificial perfect equality. The tools in Islam to redistribute income and wealth are zakat, infaq and sadaqah. The second school of fiqh does not permit to hold wealth beyond one's needs.

3.3.6. Islamic Financing

The important rule in Islamic financing is prohibition of riba. There are several economic impacts of riba. The first is that riba restrains economic growth. Keynes stated that interest restrains the economic growth, because interest block the movement of capital. When the interest is abolished, capital will move freely and grow quickly (Keynes cited in Al Asyqar cited in Tarmizi, 2015). The next economic impact of riba is that riba increases the production cost. Enterprise owners who borrow money from capital owners at a certain fixed cost will add that cost of fund to the cost of products and services they offer to consumers. The increase of production cost leads to the increase of price (Tarmizi, 2015). In addition to this, Islam also prohibits maysir. Maysir is prohibited in QS 5:90. Lafadz 'fajtanibuhu' is shigat which is used in the Quran that means maysir is forbidden or haram (Karim and Sahroni, 2015).

Financing could be classified into social financing and commercial financing. The first instrument of Islamic social financing is zakat. Zakat is one pillar of Islam. Zakat increases the purchasing power of the poor, thus it increases the consumption. At the same time, zakat functions as disincentive to wealth hoarding, thereby it stimulates the investment. The command to take zakat from societies in QS 9:103 is not only applied to Rasulullah Muhammad PBUH, but also applied to the heads of the state afterwards (Al-Faizin, et al., 2018). Decentralization of zakat management made zakat collection and distribution is not accomplished by the government anymore, and this made zakat as voluntarily action, which lead to malfunctioning of zakat institution (Malik, 2016). In addition to zakat, based on QS 3:180, wealth owner can do voluntary charity such as infaq, shodaqoh and waqf. While zakat is prioritized to fulfill the basic need or for consumption, infaq which has more flexible distribution pattern can be used both to increase purchasing power that leads to increasing consumption, and/or to decrease cost when it is used productively, such as for micro-financing. Waqf also has flexibility in management. Waqf is classified as direct waqf and productive waqf. Productive zakat, infaq and waqf can help to decrease production cost.

Ascarya, Rahmawati and Tanjung (2018) designed a holistic model of financial inclusion based on maqāṣid alsharī'ah (the objectives of Islamic Law) that also includes empowerment and development for the poor to gradually move from extreme poverty to improved status as working poor, and finally to become independent microentrepreneurs.

3.3.7. Qur'anic Verses Related with Food Security

This is a previous research about food security from Islamic perspective. Haddad (2012) identified Qur'anic verses related with food security. He grouped the verses into four perceptions. In this paper, what Haddad did is quoted by doing some revisions on which Qur'anic verses used as reference. The four perceptions are:

1. Social and spiritual perceptions.
 - a. Charity and poverty. There are many Qur'anic verses told Moslems to give food and sustenance to the needy (QS 2:273, 30:38, 17:26, 74:44, 90:12-14, 69:34), and to give the part he likes most or the best quality of his possession (QS 3:92, 2:267)
 - b. The right to food. Allah gives bounties, including food, freely to all creatures (QS 11:6), and there is sufficient sustenance for all (QS 41:10)
2. Perceptions on food supply. Moslems may not waste any resource or being extravagant and using resources in balanced way and in measured quantities (QS 25:67, 17:26, 7:31), and not being niggard (QS 2:268, 4:37, 25:67, 57:24). There is a clear distinction between lawful and unlawful food for Moslems. The order is to eat halal and thoyyib food (QS 2:168, 5:88, 16:114). Allah allows and teaches people to grow food in a good way (18:32-33) and orders to eat good food and use food wisely (QS 20:81). Doing mischief - such as harm the environment, cheating in weighing - is not accepted (QS 28:77, 2:60, 7:74, 11:84, 26:183, 29:36). Qur'an also remind to respect to Allah's bounties and to understand about the limit of human power and authorities (QS 10:24) and also about reserving food for hard times (QS 12:47-48).
3. Security perceptions. Allah feeds people, preventing hunger, and keeping people from fear (QS 106:4). Allah extends sustenance and restricts it for whom He will (QS 42:12; 34:36 & 39; 30:37; 29:62; 28:82; 17:30; 13:26), but Allah will not change the condition of a people until they change what is in themselves (QS 13:11)
4. Institutional perception. There is clear distinction between individual and collective obligation in Islam. Allah told the Moslem society to conduct their affairs by mutual consultation (QS 42:38). From Islamic perspective, matters related with public safety or handling management of fear is charged to authorities amongst Moslems (QS 4:83), and Moslems must follow the decisions of the leaders (QS 4:59). Therefore, main responsibility of food security as a part of public safety or fear is on the state and not on individual Moslem (Haddad, 2012).

The other verses encourage people to explore and utilize economic resources (QS 67:15; 62:10). One example of implementation of these verses is when Umar RA releases policy to support people to plant the unused lands. Allah also drives people to be concern with quality in doing jobs (QS 67:2) (Al-Haritsi:2006). And the other thing to remember is the obligation for everybody to work to fulfill his need and his family need, as stated in QS 2:233. Food management is shown in QS 12:47-48.

3.3.8. Food Security Framework from Tawhidi Perspective

To develop the food security framework from Tawhidi perspective, a grouping process on all of the guidance is accomplished. The guidance is classified into supply side and demand side. In supply side, all of the guidance is grouped into production guidance, financial support guidance and government role guidance. The result of this process is the identification of three aspects from supply side that need to be considered to achieve food security, those are:

1. Production of food. The guidance about production of food can be classified into three groups: production process, production factors, and producer behavior.
 - a. Production process. Firms have to produce quality products. The indicator of quality includes halal, thoyyib, and other relevant technical quality aspects. In production process, tawhid teaches to minimize waste (efficient) and also teaches a safe-for-environment production process, and production with adequate capacity
 - b. Production factors. There are some verses in the Qur'an which give guidance about usage of production factors such as land, water and agriculture technology. The fairness in distribution of land and water must be realized. In addition, production factors which considered in profit sharing determination are work, management, land and capital
 - c. Producer behavior. There is a guidance for producers to have good behavior: production is a form of worship so producers need to be tawakkal because Allah determine the results, producers have to understand sharia rules, producers must be quality oriented and not giving mudharat to the others. The intention of producers has to fulfill the need of society.

2. Financial support for food production process is needed, both from commercial and social financing. Enough commercial capital flow – interest free - to food production sector is necessary. Therefore, enough profit is important to attract investment to this sector. In addition, there is social financing instruments based on infaq, shadaqah and waqf that can be used to finance production by microentrepreneurs or to finance public production and support facilities. Financing the microentrepreneurs includes empowerment and development for the poor to gradually move from extreme poverty to improved status as working poor, and finally to become independent microentrepreneurs.
3. Government role in supply side:
 - a. Determine production priority. In normal condition, this priority is not compulsory
 - b. Production factors ownership distribution, especially land and water
 - c. Food reserve management
 - d. Protect market mechanism. There are several actions that can be done by government to protect market mechanism, e.g. providing information for all players in the market such as business opportunities and market situation, doing hisbah or market supervision, and law enforcement on uncompliant behavior. There is no price intervention in the market
 - e. Education and socialization to producers on sharia rules understanding, production techniques, and entrepreneurship
 - f. Infaq, shadaqah and waqf management.

In the demand side, the guidance from the Tawhidi sources to achieve food security is classified into consumption of food, community behavior, and government services in demand side:

1. Consumption behavior that need to be present on consumers: halal, thoyyib, moderate or not excessive, minimum waste and local product consumption
2. Consumer behavior: awareness of zakat, infaq, shadaqah and waqf payment, social bonding between community members, and awareness that Moslem has obligation to work to feed himself and his family
3. Government role in demand side:
 - a. Zakat, infaq, shadaqah and waqf collection and distribution
 - b. Consumption control
 - c. Education and socialization to nurture right consumption behavior, to educate people that working for life is highly appreciated by Allah, and education to increase the capability to work.

The result of this process, together with the definition of food security, build the Tawhidi Framework on food security, which is described in figure 1.

3.4. Food Security Ecosystem from Tawhidi Perspective

Based on all guidance which summarized in the framework, the food ecosystem is developed by identifying activities, all actors who do the activities, the flows – money, goods and services – which happen between all actors, and then describe it in a circular flow diagram as can be seen in figure 2. This diagram is developed to make the analysis easier to be done, by describing all factors that need to be considered in one canvas. This diagram is inspired by the circular flow diagram as a tool in macroeconomics analysis.

From the framework in the figure 1, there are several activities that can be identified: production of food by producers or firms, consumption of food by individuals in the households, financing the production and consumption – consist of commercial and social financing - by financial institutions, and government services by the government. Besides that, there is exchange activity which takes place in market institution. All activities must be compliant to the Islamic rules.

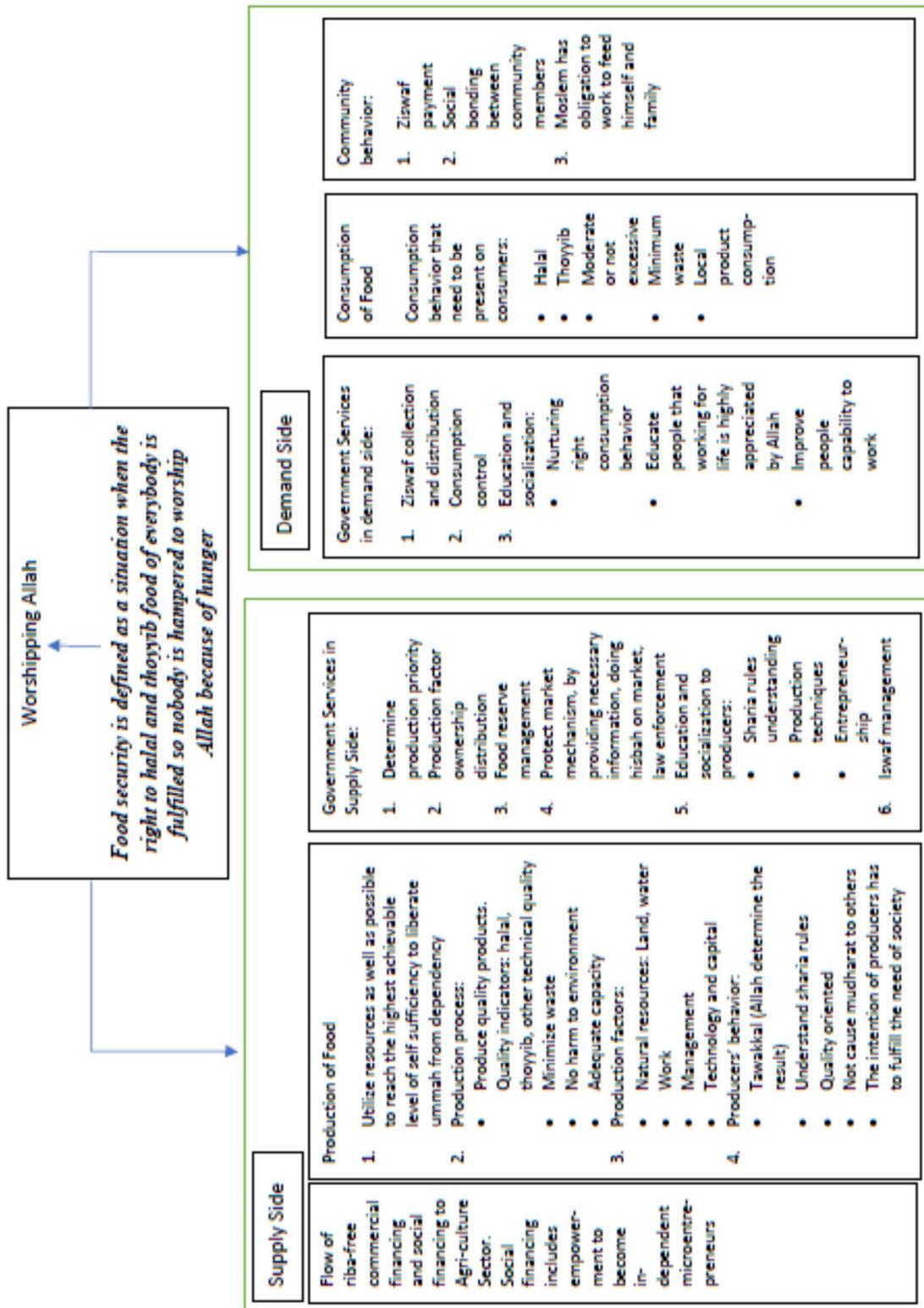


Fig 1. Food Security Framework from Tawhidi Perspective

There are differences in the size of firms, from micro to big firms. According to the guidance, there is a need for separation between firms and micro firms, because micro firms need supports more than other firms to be empowered, using productive infaq, shadaqah and waqf or iswaf. Especially for waqf, it can be used to build production infrastructure, and it can benefit all firms including big firms, which at the end will also benefit consumers. Both firms and micro firms are producers of food, and the characteristics of production process are efficient, safe to the environment, halal and thoyyib oriented and has adequate capacity. In addition, producers must have these characteristics: tawakkal, quality oriented, understand sharia rules and not cause mudharat to others. There are value chains in food production that are built by cooperation between firms, and the contracts in building those value chains must be compliant with Islamic rules, too. However, the value chains are not described in the figure for simplicity reasons.

Individuals in the households are the consumers. Food security must be achieved until the level of individual, that means the food need for every individual must be met. However, when discussing about the income or financial support for food, the unit analysis is households. The income of households as the source of money to buy food is obtained by working with the government or firms, or providing capital by doing investment or rent their assets to firms and receive profit sharing and rent from it. Loan to firms from household will not give return. In this diagram, the separation between poor households and households is necessary, because poor households have the right to receive zakat to increase their purchasing power, which be paid by the households and firms. Both households and poor households are consumers of food, and the expected behavior of consumption are halal and thoyyib, moderate or not excessive, minimum waste, and local product consumption priority.

Food produced by firms are purchased by households and governments in the market, which operates based on Islamic market regulation. Islamic market is organized to give fair outcomes to participants. It is justice that become the reason behind refusal to fix the price which shown by Rasulullah PBUH, when the price increased because of interaction between supply and demand forces. Thus, in Islamic market, one of the focus is to achieve fair price. However, the fair price is unknown. What is known is that fairness can be achieved by letting the market forces work to determine price, and the price emerges from this condition is considered as fair price. From the guidance about market taught by Rasulullah PBUH, it can be learned that market mechanism can be protected by providing enough information so sellers and buyers are well informed about price and market condition, no entry barrier, no najasy, no hoarding, no price war, and no price fixation under normal condition.

The next activity is financing activity, both in supply side and demand side. In supply side, the firms need commercial financing, provided by households or other firms, directly or indirectly through financial intermediaries, and certainly without interest. For micro firms, there are alternatives for social financing, provided by households and firms using the provided instruments.

The last agent is government. Government gives services to producers and consumers of food. In delivering these services, government is helped by academicians, ulamas, and related actors. The result of this process can be seen in figure 2.

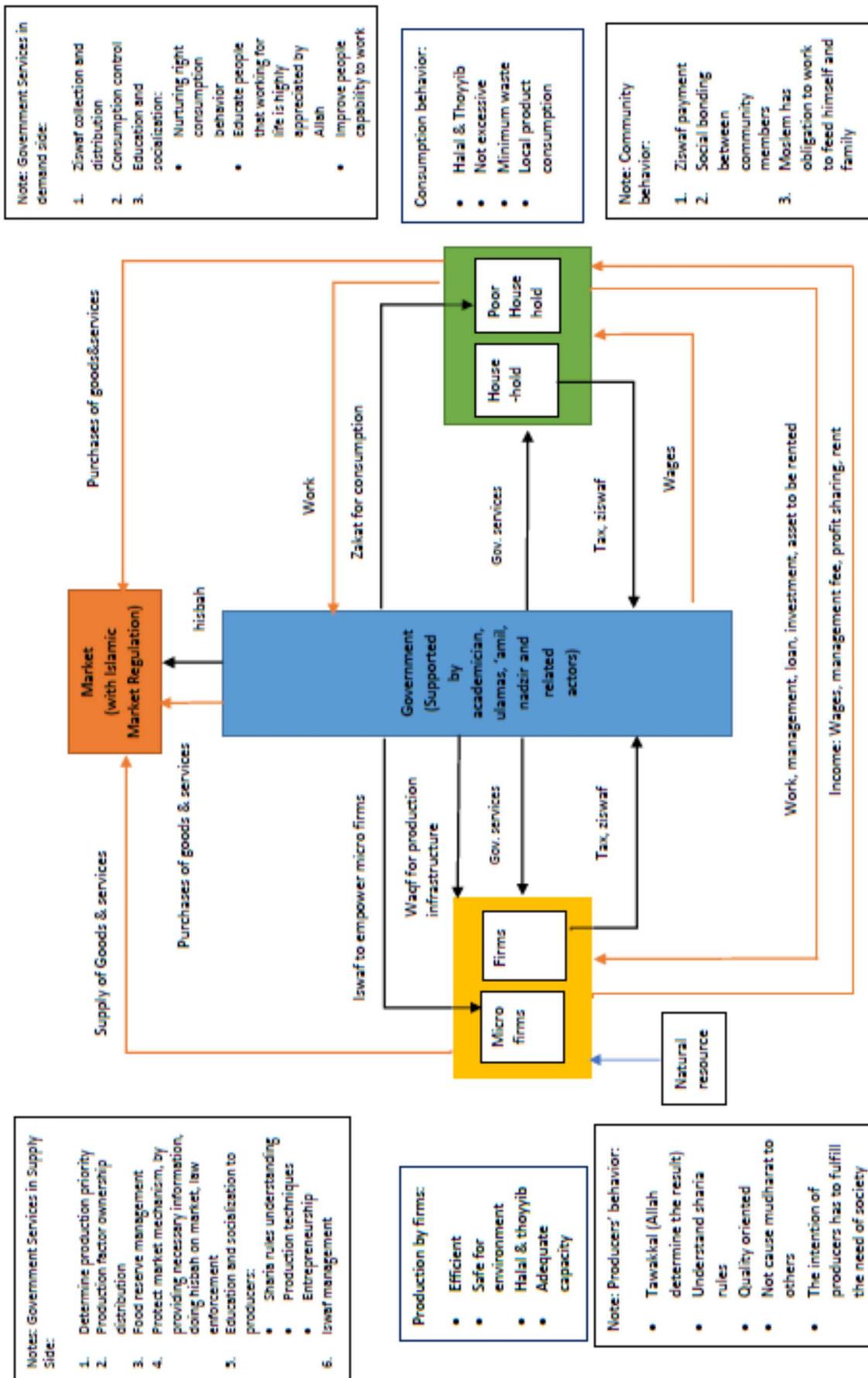


Fig 2. Diagram of Food Ecosystem from Tawhidi Perspective

From the diagram of food security framework and food security ecosystem, it can be identified that Islam gives special attention to the poor groups of society, whether they are micro firms or poor households. This attention is realized by giving help, financial and/or non-financial. At supply side, social financing is given to microenterprises to help them acquire production factors. Besides that, in the Islamic market, there is no support in the form of protection. Micro enterprises and enterprises do the transaction in same markets, which is encouraged to work based on market mechanism. The microenterprises might need education to improve their product quality and production capability, so they can compete in the same market with other enterprises. At demand side, financial support is given to poor households so they can increase the economic accessibility for food. To describe this concept, let make a four-quadrant map, in which the area of analysis is divided into real and financial sector, and both sectors are divided on social and commercial quadrant, as can be seen in figure 3. This figure maps the focus of government actions that need to be accomplished in every food value chains.

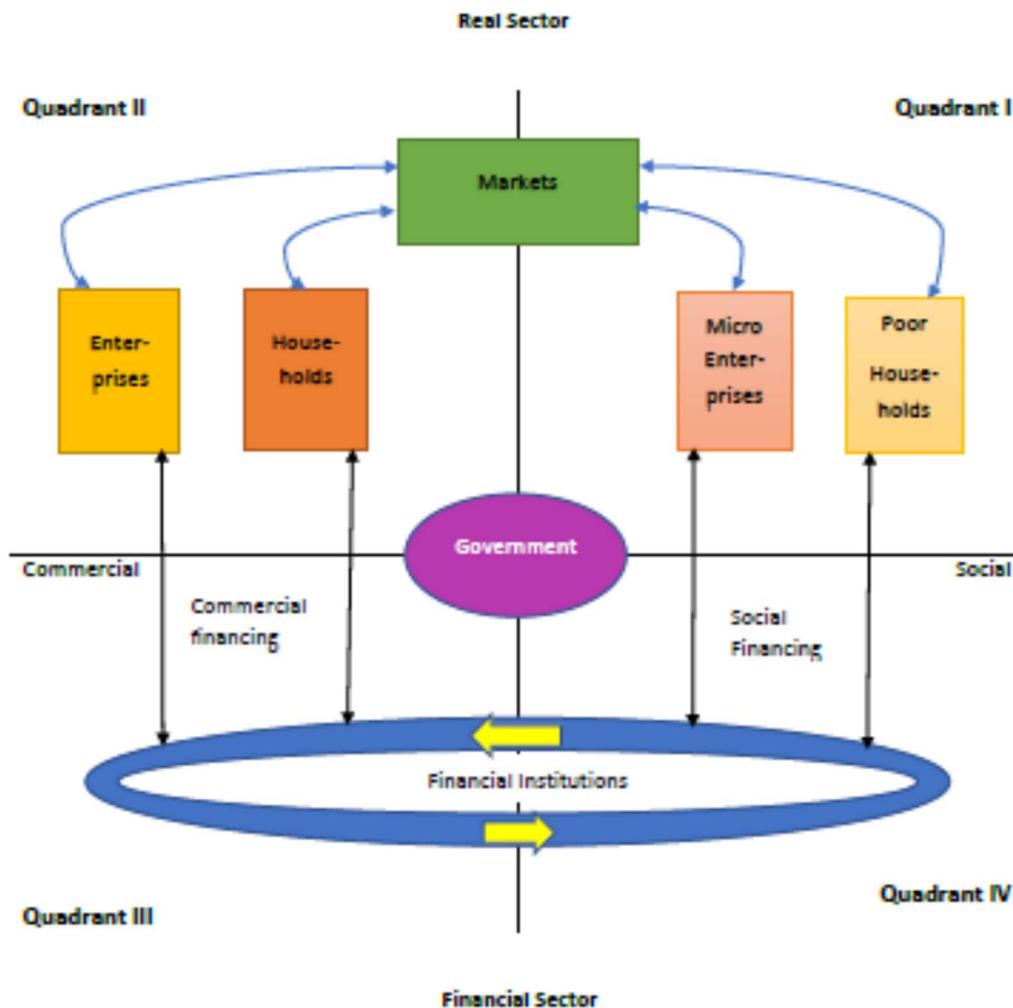


Fig. 3. Four Quadrant Analysis

Notes:

- The blue lines represent purchases and supplies of labor, goods and services in the markets
- Government is responsible to protect market mechanism, do educations to all players, food reserve management, determine production priority, production factor ownership distribution, iswaf management

In figure 3, financial sector is supporting the real sector similar like rivers flowing beneath the real sector, and financing the projects in real sector, both social and commercial projects. The investment will go to projects with suitable return for investors, in which return is not just material things but also non-material, dunia and akhirat. Social projects include production projects by microenterprises and projects to support the poor households. From participatory development concept, it is very important to make microenterprises involve actively in the development process, by providing necessary financing, education and other supports.

4. Conclusion

The Tawhidi guidance about food security is a wholistic guidance based on unity of knowledge characteristic of the Qur'an. The Tawhidi guidance about food security covers guidance on consumption, production, market fairness, financing including social and commercial financing, and government roles. Islam gives special attention to the poor groups of society, whether they are micro firms or poor households, which is realized by giving financial support, education and other types of supports. The special attention that Islam gives to these poor groups is a simple and clear strategy of Islam to achieve food security, besides moderate-halal-thoyyib consumption - with encouragement to consume local product, efficient production without harming the environment at adequate capacity to produce quality products, encouraging the market operates based on market mechanism, prohibiting riba-based financing and defining the clear role of the government.

As a closing note, it is necessary to remember that the Tawhidi principles that are used to define food security framework in this study are obtained from secondary resources or translation version. Thus, there is a room for improvement of this study. The framework of food security and the food security ecosystem resulted from this study, which are developed from Tawhidi worldview, are expected to give another perspective to find the solution of food security problems.

References

- [1] Abdel-Wahhab, M.A., El-Nekeety, A.A., Aly, S.E. 2019. Mycotoxins in Children's Food: Problem and Halal Management. *Int. J. Halal Res.* 1(1), 16-38.
- [2] Adada, A.R.M. (2019). Islam's market ideology: a brief outline. *Islamic Economic Journal*, 5(1): 1-33
- [3] Ahmad, A. (1984). A macro-model of distribution in an Islamic economy. *J. Res. Islamic Econ.*, 2 (1): 3-18
- [4] Al-Faizin, A.W., Insani, T.D., and Herianingrum, S. (2018). Zakat: concept and implications to social and economics (economic tafsir of At-Tawbah:103). *Journal of Islamic Monetary Economics and Finance*, 4(1): 117-132
- [5] Al-Haritsi, Jaribah bin Ahmad (2006). *Fikih ekonomi Umar bin Al-Khathab*. Translated from Arabic by Zamakhsyari, A.S, Jakarta: Khalifa
- [6] Al Qur'an dan Terjemahnya. Translated to Bahasa Indonesia by Dewan Penterjemah Yayasan Penyelenggara Penterjemah/Pentafsir Al Qur'an Departemen Agama Republik Indonesia. Printed in Medinah Munawwarah
- [7] Al Qur'an (electronic version) Ayat – al Qur'an KSU mosshaf project. English translation
- [8] Ascarya, Siti Rahmawati and Hendri Tanjung (2018). Designing Holistic Financial Inclusion Based on Maqasid al-shariah. *Islamic Finance: A Catalyst for Shared Prosperity?* Islamic Development Bank. Jeddah.
- [9] Badan Ketahanan Pangan (2019). Laporan tahunan Badan Ketahanan Pangan tahun 2019. Jakarta: Kementerian Pertanian
- [10] Maryati, T., 2020. Consumer Behavior Changes Post Pandemic Covid-19. *Int. J. Halal. Res.* 2(2) 84-89.
- [11] Badan Ketahanan Pangan (2019a). Peta ketahanan dan kerentanan pangan 2019. Jakarta: Kementerian Pertanian

- [12] Bashar, M.L.A. (1997). Price Control in an Islamic Economy. *JKAU: Islamic Econ.*, 9: 29-52
- [13] Choudhury, M.A. (1993). Comparative development studies: in search of the world view, New York: St Martin's Press
- [14] Choudhury, M.A., Hossain, M.S., and Solaiman, M. (2008). A wellbeing model of small-scale microenterprise development to alleviate poverty. *International Journal of Sociology and Social Policy*, 28(11/12): 485-501
- [15] Choudhury, M.A. (2013). Handbook of Tawhidi methodology: economics, finance, society and science, Jakarta: Trisakti University Press
- [16] Choudhury, M.A. (2016). God-conscious organization and the Islamic social economy, New York: Routledge
- [17] Choudhury, M.A. (2019). Methodological dimension of Islamic economics, Singapore: World Scientific Publishing
- [18] Datucali, N.M. and N. R. A. Sali, 2020. Extent of Awareness on Halal Food Among Muslim Students Consumers of The University of Southern Mindanao, *Int. J. Halal. Res.*, 2(2) 78-83.
- [19] Food and Agriculture Organization (2006). Food security. *Policy Brief*, Issue 2
- [20] Grebmer, K.V., et.al. (2018). 2018 Global hunger index: forced migration and hunger, Dublin/Bonn: Welthungerhilfe and Concern Worldwide
- [21] Grebmer, K.V., et.al. (2019). 2019 Global hunger index: the challenge of hunger and climate change, Dublin/Bonn: Welthungerhilfe and Concern Worldwide
- [22] Grebmer, K.V., et.al. (2020). 2020 Global hunger index: one decade to zero hunger - linking health and sustainable food system, Dublin/Bonn: Welthungerhilfe and Concern Worldwide
- [23] Haddad, M. (2012). An Islamic perspective on food security management. *Water Policy*, 14: 121-135
- [24] Hasan, Z. (2007). Sustainable development from an Islamic perspective: meanings, implications and policy concerns. *MPRA Paper*, 2784
- [25] Ibn Kathir. Tafseer. Translated and abridged by a group of scholars under the supervision of Shaykh Safiur-Rahman Al Mubarakpuri. Darusalam
- [26] Islahi, A.A. (1985). Ibn Taimiyah's concept of market mechanism. *J. Res. Islamic Econ.*, 2 (2): 51-60
- [27] Kamal, M. A. (2018). Kontekstualisasi makna thoyyib dalam Al-Qur'an dan implementasinya terhadap kriteria sertifikasi halal MUI. *FSH UNSIQ Proceeding Series: On Islamic Studies, Sharia and Law*, 1(01): 153-172
- [28] Karim, A.A. and Sahroni, O. (2015). Riba, gharar dan kaidah-kaidah ekonomi syariah: analisis fikih dan ekonomi, Jakarta: Raja Grafindo Persada
- [29] Lozaro, R. (2008). Envisioning sustainability three-dimensionally. *Journal of Cleaner Production*, 16: 1838-1846
- [30] Malik, B.A. (2016). Philanthropy in practice: role of zakat in the realization of justice and economic growth. *International Journal of Zakat*, 1(1): 64-77
- [31] Marshall, J.D. and Toffel, M.W. (2005). Framing the elusive concept of sustainability: a sustainability hierarchy. *Environmental Science & Technology*, 39 (3): 673-682
- [32] McMahon, G.F. and Mrozek, J.R. (1997). Economics, entropy and sustainability. *Hydrological Sciences-Journal-des Sciences Hydrologiques*, 42(4): 501-512
- [33] Nirwandar, S. 2020. Halal Gelatin and its Business Opportunity in Indonesia. *Int. J. Halal. Res.* 2(2) 50-57.
- [34] Oshaug, A., Eide, W.B., and Eide, A. (1994). Human rights: a normative basis for food and nutrition-relevant policies. *Food Policy*, 19 (6): 491-516
- [35] Qardawi, Yusuf (2002). Hukum zakat. Translated from Arabic by Harun, S., Hafidhuddin, D., Hasanuddin, Bogor: Pustaka Litera AntarNusa
- [36] Sarkawi, A.A., Abdullah, A., Dali, N.M. (2016). The concept of sustainability from Islamic perspective. *International Journal of Business, Economics and Law*, 9(5)

-
- [37] Tarmizi, E. (2015). *Harta Haram Muamalat Kontemporer*, Bogor: Berkat Mulia Insani Publishing
- [38] The American heritage dictionary. <https://ahdictionary.com/word/search.html?q=sustainability>
- [39] Undang-Undang Republik Indonesia No. 33 tahun 2014 tentang Jaminan Produk Halal. Jakarta: Kementerian Sekretariat Negara Republik Indonesia
- [40] United Nations (2020). *The sustainable development goals report 2020*
- [41] Wahyono, Z., and M. A. A. Razak, 2020. *Islamic Tourism in Southeast Asia: The Concept and its Implementation*. *Int. J. Halal Res.*, 2(2): 90-105.