Quadruple Helix Governance As An Effort in Maintaining Food Security Through Islamic Philanthropy

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INFORMASI ARTIKEL

Histori Artikel:
Diterima Mei, 2023
Direvisi Juni, 2023
Diterbitkan September, 2023

Keyword:
Food Security
Islamic Philanthropy
Quadruple Helix
Sustainable Development

ABSTRACT

Food is a basic human need that must be fulfilled at any time and plays many important roles in the life of a nation. A nation’s capacity to sustain the economic existence of global dynamics can be attributed to the availability of food that can be obtained by many stakeholders. This paper aims to provide a model of food security through Islamic philanthropy with the Quadruple Helix approach, which is the connection between academia, business, the government and the community, which coordinating well with the other. This paper is a qualitative study with the method used was literature research through a systematic review approach. The findings of this study provided the result that food self-sufficiency cannot be realized without the role of quality and productivity at the core of food self-sufficiency; thus, the government must take a stand and fully support it. Academics had a significant part in the advancement of technology and effective food processing. The businesses had an equally critical role in supplying financing for industrial growth and creating jobs for the local population. In addition, the government, business and community could assist aid in the development and attainment of food self-sufficiency by creating functional food systems that will be possible to implement more suitable policies in the context of achieving food self-sufficiency.

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Introduction

Human well-being and economic growth could be achieved because Islam ensures that the basic needs of every individual are met. Islam makes the state every guarantor for meeting the basic needs of the people (food, housing, clothing, health, education and security) (Juliana et al., 2018). Food security is a critical and strategic issue because there is no single country can develop long before achieving food security (Rachman & Ariani, 2002). In this regard, Indonesia has been committed to achieving food security as stipulated in Law No. 18 of 2012. The law states that there is an obligation to ensure the availability, affordability and fulfillment of adequate, safe, high quality and nutritionally balanced food consumption guarantees. The Food and Agriculture Organization (FAO) states that food security further comprises four dimensions: food availability, economic and physical access to food, food transformation and security of supply, and access to food which can be classified as sustainable use.

Another phenomenon related to food security is that food is a basic human need that must be fulfilled at any time and plays many important roles in the life of a nation (Putra, 2019). However, the important role of food security in recent years is food shortages due to reduction of agricultural productivity due to population growth. It’s not only due to a derivation in agricultural land converted to business parks and real estate, but also becoming increasingly unattractive for younger generations to become involved in this food security

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strategy (Miyasto, 2014). Even solving the problem of food security caused by low population consumption can not be solved by the conventional economic system. This is because there is no mechanism to transfer wealth from the rich to the poor, only taxes (Dandy et al., 2018). Taxes are levied to the wealthy, but as evidenced by total tax revenue of IDR 1,084.5 billion in 2021 (Nasional, 2021), tax revenue is often not evenly distributed. According to (Wibisono, 2015), the impact of tax spending on consumption is ambiguous, as tax allocation is entirely at the discretion of the government. Indonesia’s food security problem has not yet been resolved.

Therefore, Islam is concerned with food security. Food security is indirect insurance of life and property, based on the protection of the five Maqashid Sharia: religion, soul, spirit, property and honor. One of Islamic economic mechanisms to achieve food security is charity (Putra, 2019). Charity in Indonesia can be divided into two groups: Islamic charity (religious-based) and general charity (not affiliated with any particular religion). This is done by several religious groups such as NU and Muhammadiya, who set up special institutions to manage charitable foundations such as Lazismu, Lazisman, Zakat House and Dompet Dhuafa. Philanthropy generally resembles Aksi Cepat Tanggap (ACT), but this study focuses on Islamic philanthropy.

Waqf Information System (SIWAK) according to the Ministry of Religious Affairs in 2021, Indonesia's land waqf potential will reach a total of 414,829 locations covering an area of 55,259.87 hectares. Then, according to the Indonesian Waqf Agency (BWJ), Indonesia's cash waqf potential would reach IDR 180 trillion each year (Budiarto, 2021). In addition, other Islamic philanthropy instruments such as zakat have great potential. In 2019, the zakat potential across Indonesia was estimated at 233.8 tons. Each year, the country's zakat collection shows an average increase of 30.55%. In 2016, Zakat administered by Baznas and LAZ reached IDR 5,017.29 trillion, IDR 6,224.37 trillion in 2017 and IDR 8,100 trillion in 2018 (Badan Amil Zakat Nasional, 2020).

If Zakat, Infaq, Shodaqoh and Waqf (ZISWAF) becomes a high-level strategy to strengthen community empowerment, the economic situation of Muslims in Indonesia will undoubtedly improve and poverty will be reduced permanently. By contributing to the success of agendas for the benefit of people and the planet by eradicating poverty, fighting inequality, promoting human rights and protecting the environment. According to (Narayanan, 2013), the role of religion is can be included in achieving economic sustainability. His three ways religion can contribute to food security are through Islamic values, the environment society, the potential for political action, and the self-development capacity of stakeholders. The concept of sustainable food security corresponds precisely to religious beliefs. This finding is supported by (Moi, 2016), who found that religion can enhance economic growth and environmental and economic sustainability.

Stakeholder collaboration must accordingly be implemented to create innovations that focus on the role of productivity, technology and knowledge change, and the role of stakeholders in contributing (Praswati, 2017). Through the strategic helix approach, the food industry can be developed by involving the participation of various stakeholders for the realization of ideal food security. Because the helix concept is based on the idea that innovation is an interactive result involving various actors, each contributing according to their institutional function in society (Rozikin & Ap, 2019). Research conducted by (Wahdinawaty et al., 2022) on the influence of Quadruple Helix (QH) as a solution to post-covid-19 economic recovery, shows that Quadruple Helix (QH) collaboration is able to present solutions for national economic recovery by referring to structure and process as well as input and output. Through an emphasis on adaptive behavior, cooperation, and interaction with the social environment in order to create a balance that can encourage and accelerate efforts to restore a stronger, superior, and sustainable national economy after COVID-19.

Based on the background above, this study will adopt the ZISWAF instrument as a food security solution through a quadruple helix collaboration model approach between governments, universities, industry and communities. This can be used as a breakthrough to foster food security innovation. The Quadruple Helix collaboration will create collaboration opportunities and food It aims to increase openness to innovation by addressing barriers to the security implementation of feasible food. This article therefore aims to describe and analyze the relationships among ZISWAF stakeholders through a quadruple-helix approach to developing food security.

Quadruple Helix Governance Model

The Quadruple Helix model may be seen as a development of the Triple Helix approach, which increasingly emphasizes the role that society acts in addition to the actors from academics, government, and industry. The Quadruple Helix (QH) collaboration model is a form of metamorphosis from the Triple Helix (TH) model that had previously appeared. In the Quadruple Helix model there is one additional element, namely “society” or “public” in addition to the other three elements that already exist in the Triple Helix, namely

ISSN: 2355-0295, e-ISSN: 2549-8932
http://ejournal.bsi.ac.id/ejournal/index.php/ecodemica
According to (Afonso, 2010) (Carayannis & Rakhmatullin, 2014) (Cai & Lattu, 2022), adding a fourth helix to the triple helix model is crucial for development, however it’s unclear exactly what that fourth helix is made up of. Research conducted by (Afonso et al., 2012), suggests that adopting the end-user viewpoint of the fourth helix includes, for example, community members embedded in the artistic and cultural fabric of a community. While research conducted by (Carayannis & Campbell, 2009), conceive of the fourth helix as media, culture, and civil society, stating that this helix is human-centered, concentrates on democratic knowledge, and promotes the arts, artistic research, and innovation rooted in the arts. According to (Park, 2014), the additional element of "society" in the Quadruple Helix is a response to the development of democracy and conditions of innovation whereas the Triple Helix model is considered less sensitive to the development of democratic issues that develop in a society based on media and culture. Meanwhile (Cai & Lattu, 2022), argue that the fourth helix is generally defined as values, culture, and general background for the innovation process. The Quadruple Helix Model can be seen in table 1.

Figure 1 Quadruple Helix Model

Source: Author's, based on (Carayannis & Campbell, 2009)

Food Security

Achieving sustained food security and self-sufficiency demands the participation of all stakeholders, given the increasingly complex issues. According to (Salasa, 2021), national food security occurs when there is a balance between supply and demand for national food needs at the price level and the amount of availability in the market that can be accessed by the community. According to Law no. 18 of 2012 concerning food describes food security as “a condition of fulfilling food for the state down to individuals, which is reflected in the availability of sufficient food in terms of quantity and quality, safe, diverse, nutritious, equitable, and affordable, and does not conflict with religion, beliefs, and community culture, to be able to live healthy, active lives that are productive and sustainable”. While the World Food Organization (FAO) defines food security as a situation in which enough food is available to meet everyone’s needs in terms of food quality and quantity at all times in order to live a healthy, active, and productive life (Nainggolan, 2020).

The key success factor for food security is the accessibility of the population to these foodstuffs. This accessibility is largely determined by the national logistics system (related to the distribution system, transportation and warehousing facilities and infrastructure), considering that food products are generally not durable. According to (Purwaningsih, 2008) the criteria for fulfilling food security include; a) Availability of food: an adequate amount of food (food sufficiency), b) Food safety: food quality guaranteed free from possible biological, chemical and other contaminants that can disturb, harm and harm human condition, c) Food equity: a food distribution system that supports the availability of food at any time and evenly, d) Food affordability: it is easy for households to obtain food at affordable prices.
According (Miyasto, 2014), the food security strategy cannot only be carried out through a supply-side approach but must comprehensively strengthen the capacity and quality of demand, production factors used, economic structure and supporting industries. Therefore an approach through a resource-based strategy is the optimal way to increase food self-sufficiency and economic competitiveness because it is more in line with conditions in Indonesia. To realize sustainable food security, it is necessary to adjust or change the direction of policies that are currently being implemented. These changes are in the form of goals, methods and targets for developing food security, food development policies to ensure the provision of fair and equitable food at the community, household and individual levels.

Islamic Philanthropy

Philanthropy is defined as a sense of care for others that is exhibited through philanthropic activities. Philanthropy is also defined as giving voluntary donations, providing voluntary services, and providing voluntary associations to help those in need (Abidin, 2012). Islamic philanthropic practices such as zakat, infaq, shodaqah, and waqf are referred to as "philanthropy" about Islam (ZISWAF). These phrases enable Islamic charitable activities to address a larger variety of problems. This idea of Islamic charity can be related to social justice, human welfare, public policy, good governance, and professional management challenges, in addition to conventional discourses like Islamic fiqh and ethics.

Islam advises its followers to engage in humanitarian efforts so that riches do not simply benefit the wealthy (QS. al-Hashr: 7). The Qur'an often employs the phrases zakat, infak, shodaqah, and waqf (ZISWAF), which indicate giving, to describe philanthropic efforts. This Islamic charitable system was developed by jurists who drew on the Al-Qur'an and the Prophet's Hadith to establish requirements for the kind of property, the required minimum, the quantity, and other guidelines (Bahitsul, 2021). Islam places a high priority on charitable giving, as seen by the way the Qur'an emphasizes the harmony between paying zakat and establishing prayer. The Qur'an's injunction to do zakat is so strict that it is repeated 72 times (ita' az-zakat) along with the requirement to practice prayer (iqam ash-salat). The term infak, in all of its derived forms, appears 71 times, and the phrase shodaqah, 24 times, illustrates the significance and practice of Islamic philanthropy (Kasdi, 2016). Islam's primary principles are its teachings about prayer, and paying zakat is regarded as being similar to carrying out the prayer (QS. al-Baqarah: 177).

The concept of Zakat, Infaq, Shodaqah and Waqf (ZISWAF) recommends that every member of his community always share and give to others. This sharing and giving behavior can be interpreted as a charitable and voluntary activity that aims to make it easier for everyone in need (Kasif et al., 2015). In addition, giving and sharing is one that can improve one's welfare. This can be seen from the many people who are below the poverty line who feel facilitated and assisted by this sharing activity (Afandi, 2021). So that donation activities or donating part of the fortune can be trusted as one of the support for the poor who are in need but are not touched by the government.

Methods

This article uses a deductive qualitative research method with a literature study was used in this study (Hamzah, 2019). Each stage of library research is carried out according to a systematic review approach (Hadi & Palupi, 2020), including the identification of a research topic, setting boundaries of related research, collection of related research, selection and extraction of research according to the research theme. Literature data analysis was performed using the method of meta-synthesis approach (Cooper et al., 2017). Meta-synthesis is performed by summarizing the results of previous research that matches the research theme using a narrative approach after selecting and extracting search results. The data collection stage in this study uses 2 systematic reviews, namely; First, summarizing the results of previous research that matches the research theme using a narrative approach after selecting and extracting search results. Second, research is conducted by identifying, evaluating, and interpreting findings related to certain topics or phenomena (Siswanto, 2010). Some of the points analyzed in this study are; 1) ZISWAF’s impact on efforts to strengthen food security, 2) Relationships Among Islamic Philanthropic stakeholders through a Quadruple Helix approach in developing Sustainable Food Security.
Result And Discussion

Ziswaf's Impact On Food Security

ZISWAF became an important instrument of state fiscal policy under Islamic rule (Markavia et al., 2022). Zakat can be one of the fiscal instruments by regulating its distribution. If zakat is a mandatory sector in the distribution of wealth then infaq, shodaqoh and waqf are voluntary sectors (Mustofa, 2014). Waqf in several countries has increased people's welfare, such as Palestine which developed waqf for education and Saudi Arabia with waqf on behalf of Utsman Bin Affan RA, until now the proceeds from waqf date palm plantations continue to be enjoyed by pilgrims (Almakki, 2017). Starting from empowering farmers as the main profession in maintaining food security, then empowering traders and markets as food distribution channels and empowering consumers to be able to access food.

According to (Miftakhuddin, 2021), the initiative to protect agricultural land from development and pollution may be a solution to the loss of agricultural land in many areas. The Indonesian Waqf Department and the Ministry of Agriculture, as a department in charge of agriculture, can start this waqf movement. This can be a forum for the poor and disadvantaged who struggle with land ownership and possesses agricultural land.

The capacity of farmers to bring their families to work on their farms and access to acreage is crucial to their sustainability. Therefore, a Mukhabarah contract is used to grow waqf land or agricultural lands with the community to make unproductive waqf land more productive (I. Rahman & Widiastuti, 2020).

According to (Rahma, 2021), developing waqf at food trade hubs to facilitate food distribution and strengthen the trade sector of the national economy by supporting entrepreneurs with Mudharabah or Musyarokah contracts with equity capital. In addition, the development of supporting infrastructure to facilitate food distribution channels to maintain price stability and distribution of food throughout the region. Development of MSMEs through zakat and waqf as a way of creating jobs, particularly in the sectors of food processing and agricultural goods since the impact would be quite broad with rising food market demand. People who can work will be able to remain productive and meet their basic needs with the support of this empowerment. as the primary issue that is frequently encountered.

According to (Atabik, 2014), productive zakat and cash waqf can be used as a solution for community economic development by making it a business capital in the real sector. Economic development in the real sector has a positive effect on employment which will reduce unemployment and poverty. The use of productive zakat and cash waqf has been carried out by many amil zakat institutions such as Daarut Tauhid's People Care Wallet which has developed the utilization of productive zakat in the fields of MSME, agriculture and animal husbandry. This utilization has an impact on increasing the income of the people who participate in the program so that their purchasing power increases (R. M. Rahman, 2020). Indonesia is a country with a culture of cooperation and mutual help. This is very much in line with Islamic teachings which instruct humans to help their brothers and sisters who are in trouble. Infaq and shodaqah are forms of mutual help in Islam. Infak is always associated with wealth while shodaqah has a broader meaning, it can be with property or deeds.

In the digital era like now, distance is not a barrier for someone to give shodaqah. The ease of assisting trusted institutions has become a trend in society and is expected to become a sustainable lifestyle.

Relations Between Ziswaf Stakeholders In The Development Of Food Security Through The Quadruple Helix Approach

The application of the quadruple helix collaboration model in strengthening the food sector is supported by the fulfillment of basic needs rights regulated in law no. 7 of 1996 and enhanced by law no. 18 of 2012 concerning Food, where the government is required to strengthen the resilience of the food industry through institutional capacity, one of which is through intergovernmental cooperation with various parties, including educational institutions, research and development institutions, industry associations, and professional associations. According to (Suman et al., 2019), the process of collaboration between actors must consider the potential, social, economic and cultural conditions of the community to create sustainable welfare and benefits for the next generation, so the analysis of the role of actors in the quadruple helix approach considers this background.

The Quadruple Helix is a framework for innovation that unites academics, businesses, community and government. The four helixes are the primary forces behind the emergence of creativity, ideas, science, and technology, all of which are essential for the expansion of the creative sector. Therefore, the development of a strong and durable innovation is determined by the three players' intimate interaction, mutual support, and symbiotic mutualism.
A. The university provides support to ZISWAF stakeholders through training, training and education. This activity is a capacity-building technique carried out to improve human resources’ ability to information and technology to improve performance and productivity. In addition, the university also provides support in developing human resource capacity and technology through the transfer of research and development results carried out through the Institution of Research and Community Services (LPPM) so that both academics and students can be directly involved in developing food security in society. As a knowledge incubator center, the university is expected to be able to create new actors from both university students and alumni, based on reports (PDDIKTI, 2021) in 2019 as many as 28,551 people aged 20-24 years are currently pursuing higher education and have the potential to bring up new actors who have adequate insight. So indirectly it also plays a role in increasing efforts to strengthen sustainable national food security.

B. Synergy between business actors, both zakat management institutions and waqf management institutions, is necessary because zakat and waqf are public funds intended for the community. In addition, zakat and waqf are the spearheads of the Islamic social finance sector. Even though they are different in substance, the designation of the two is for the welfare of the community, therefore the management of zakat and waqf cannot be left to run independently without any effort to synergize the two, especially since the poverty and unemployment rates have not been optimally resolved, this has hampered efforts to strengthen food security. The synergy between zakat and waqf management institutions can be carried out in several synergy programs, including program synergies and regulatory and policy synergies.

C. The role of the community (civil society) in building a strong network of cooperation between members can bridge and facilitate relations between business actors and the government. The community has an important role in the collaboration process where the community is a source of innovation and knowledge that emerges from the creative process of policy users (community) through strengthening the network of community groups that have been formed. The process of communication and interaction carried out by the community with other stakeholders can build trust between the actors involved. This is by the principle of collaborative governance, namely the process of collaboration aims to build trust between the actors involved.

D. Government policy is to improve coordination in the formulation of food security policies. Achievement of effectiveness in coordinating the formulation of food security policies in which increased coordination and synchronization as a development planning effort. In this case the government continues to maintain food availability through the pillars of food security, which consists of the availability of sufficient food both in quantity and quality, affordability of food or having the resources to obtain food, and proper use of food based on nutritional knowledge.

Efforts to strengthen food security through ZISWAF need to be encouraged by the government and legislative institutions by providing maximum support. Political support and government policies also need to be carried out simultaneously with socialization that reaches all levels of society equally. Regarding the future
of ZISWAF management from the perspective of Indonesian law, institutional restructuring is something that needs to be done so that development does not stagnate or degrade. Institutional management must be seen from two different scales but are related to one another. First, it is carried out by the ZISWAF institution on matters of a technical and micro nature. Second, the government policy zone matters that are fundamental and macro.

Conclusion

As one aspect of Islamic doctrine with a spiritual dimension that emphasizes the importance of economic welfare and social dimensions, ZISWAF is able to handle food problems starting from the production, storage, and distribution stages to the consumption stage by becoming a source of capital and a source of income. If managed productively, it will be able to perform more functions, such as providing public facilities, economic empowerment, and many others. These objectives are in line with the paradigm of benefit which is the orientation in Islam. As for the form of role analysis carried out by each Islamic philanthropy actor in the Quadruple Helix collaboration model as an effort to strengthen food security, the actions taken by these actors are no longer top-down. Through the inclusion of the community in the collaboration process with its role as facilitation in providing input to other stakeholders, it can make this collaboration bottom-up and more open. It is a clear finding that innovation performance requires an open mind character and continuous knowledge-sharing behavior so that creativity can support the creation of superior new products and services. Therefore, the innovation process resulting from the Quadruple Helix collaboration process can increase the productivity of the food industry in terms of increasing the number of products and the quality of products that have high sustainability.

Our findings are limited to the collection of relevant empirical material, selecting data based on current and past events. In the absence of an exhaustive study of the interactions involved among the described helix actors, we hope to illustrate the implementation of the Quadruple Helix actor framework in each interaction process, knowledge of collaboration, innovation and adaptation of interactions with the social environment relating to elements of food security. Future research is expected to explore the depth of interactions and roles of Quadruple Helix actors or even modify the helix roles. This research can provide a variety of information that can be used as a basis for choosing alternative solutions for economic recovery and even as an indicator of the development of a country's development, especially in terms of food.

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