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Waste Bank-Socio-Economic Empowerment Nexus in Indonesia: The Stance of *Maqasid al-Shari'ah*

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Abstract: With the rapid increase of waste throughout the country, the government of Indonesia has enacted regulations targeting waste reduction using religious sentiment. This is employed in Malang City's "*Waste Bank of Malang*" (WBM). This study aims to analyze the impact of waste banks on socio-economic progress, and to assess their efficacy in accomplishing this objective from the *Maqasid al-Shari'ah* perspective. The research employs a descriptive qualitative approach and uses both primary and secondary data sources. This study found that the operation of WBM contributes considerably to the community's economic and social well-being. Likewise, the WBM has successfully managed waste by reducing, reusing, and recycling it as it is collected from customers. The customers receive financial incentives from the waste bank in return for providing recycled waste to a specialized firm under a profit-sharing (PLS) contract. As per the findings of the study, the rationale of the waste bank aligns with the *Maqasid al-Shari'ah* and the Islamic finance contract of PLS arrangements.

Keywords: waste; Waste Bank of Malang; socio-economic empowerment; *Maqasid al-Shari'ah*

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1. Introduction

Solid waste is becoming a complex issue not only in Indonesia but around the globe, due to increases in population, quantity of waste, damage to environment, decline in health services, and the lack of public awareness. Governments around the world are forced to address waste management issues due to their detrimental impact on our daily lives. Waste is causing environmental damage, climate change, loss of animal and marine life, and the spreading of illness, as well as triggering floods and air pollution, and disturbing an area's aesthetics. Recently, (Wahjoedi et al. 2020) noted that factors which contribute to waste generation are population and its density, economic growth, undisciplined public consumption, and the 'throw away' culture in Indonesia, which is ranked the fourth most populated country globally (Countries in the World by Population 2022). Indonesia is also ranked second in plastic waste production, following China (Satria 2018).

Indonesia currently produces 6.8 million tons of plastic waste per year, with only 10% of it ending up in recycling centers. It is estimated that the amount of waste dumped into the oceans reaches 625,000 tons annually (Hallee 2021). Malang[1], one of Indonesia's cities in the province of East Java, produces 1004.86 tons of waste daily (Fadhilah et al. 2019). As a result, the current waste in Malang has become a serious problem, especially in terms of its environmental impact.

Several countries have launched waste management projects or strategies to deal with the waste issue. In recent years, a waste bank concept has been set up to control waste management in Indonesia, and specific attention is being given to Malang. The bank's motto is "3Re", which stands for reduce, reuse, and recycle (Muljaningsih 2021). A waste bank

can contribute to a neighborhood's social and economic well-being. An enlightened society would reduce waste disposed of in landfills by applying the 3Re principles. Likewise, the community may earn additional income by selling recycled products (Suryani 2014). Therefore, increasing awareness of the need for effective waste management is crucial for a better environment.

Many people perceive that waste is something worthless. As a result of this understanding, individuals are less concerned about the issue of waste. They are less willing to manage waste on their own to prevent environmental problems. This unaware view related to waste needs to be changed. Some people are aware of how managing waste independently can decrease environmental problems. The operation of a waste bank also focuses on changing the behavior and perspective of the community. The management of a waste bank prioritizes the participation of the community or the bottom-up approach (Ridha et al. 2021).

The waste bank can contribute to the neighborhood's social and economic well-being. An empowered society would reduce waste disposed of in landfills by applying the 3Re principles. Likewise, the community may earn additional income by selling recycled products (Suryani 2014). Therefore, increasing awareness of the need for waste management is crucial for a better environment.

Many people ignore waste management. They do not consider the long-term impact of waste on the environment. A waste bank, an institution dedicated to waste management, is a revolutionary concept for improving community awareness on the importance of separating household waste, reusing, and recycling it. This concept intends to educate the public about the importance of waste sorting at the source and to help society economically (DLH 2020).

Malang City Council established a waste bank institution named the Waste Bank of Malang (WBM) or "*Bank Sampah Malang*" (in Indonesian) on 26 August 2011. The rapid and unchecked growth of the population of Malang has meant an increase in waste. Based on data from the Central Bureau of Statistics of Malang (CBSM 2020), the population of Malang increases year by year, as shown in the following Figure 1.

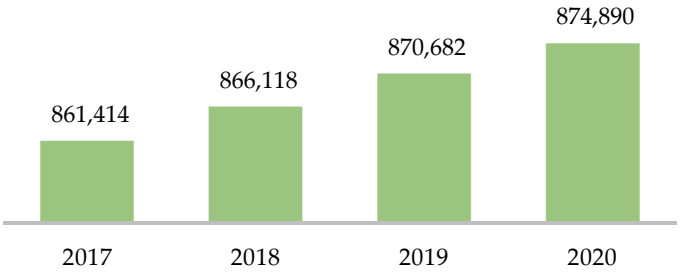

Figure 1. The population of Malang (2017–2020), as recorded by the Central Bureau of Statistics of Malang (CBSM 2020) or "*Badan Pusat Statistik Kota Malang (BPS Kota Malang)*" (2020).

The Figure 1 above shows the increase in population in Malang for the years 2017–2020. It does not count the number of migrants who came to Malang to work and study. The Figure 2 below shows that the population in 2022 is above 900,000, and that it will exceed 1,000,000 if this average annual linear trend continues, with predicted growth rate reaching 3.12%, which is more than double.

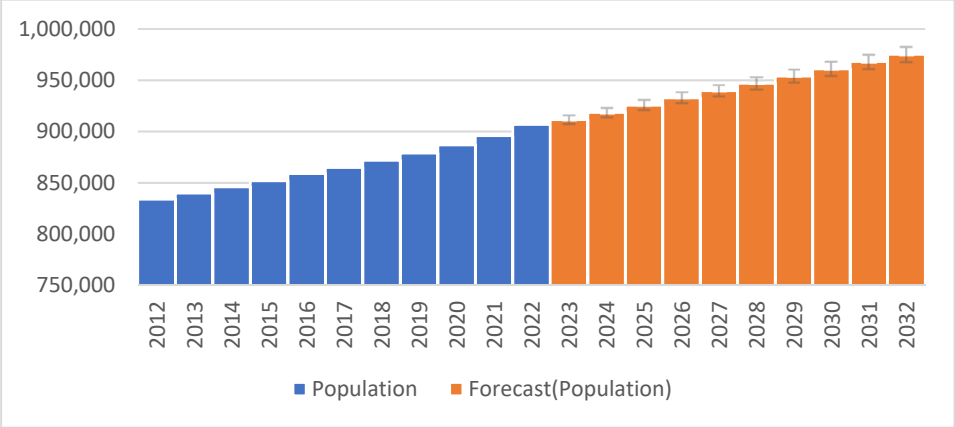

Figure 2. The population of Malang (2012–2022), as recorded by the Central Bureau of Statistics of Malang or "*Badan Pusat Statistik Kota Malang (BPS Kota Malang)*" CBSM (2021a), Data processed.

The rising population trend in Malang is causing a higher volume of waste in the area to be generated (Pratama and Ihsan 2017). In 2020, the amount of waste per capita in tons in Malang reached 55,884.15. In 2021, the amount of waste increased by 22.71 %, which was 59,660.54 (CBSM 2020–2021), data processed). Therefore, the goal of WBM is to deal with this issue, especially since the landfill in Malang is overloaded every day (Diartika and Al-Muhdhar 2021). The area covers approximately 32 hectares, and the waste is sourced from households, factories, and municipalities. It is now virtually a mountain. Every day, about 150 trucks transport waste to this place (Aminudin 2018).

Adding to this problem, the growing population in Malang means that total unemployment increases simply because there are not enough jobs for the available positions, based on the data from CBSM Central Bureau of Statistics of Malang or "*Badan Pusat Statistik Kota Malang (BPS Kota* Malang)" (2021). The following Figure 3 illustrates the unemployment numbers in Malang.

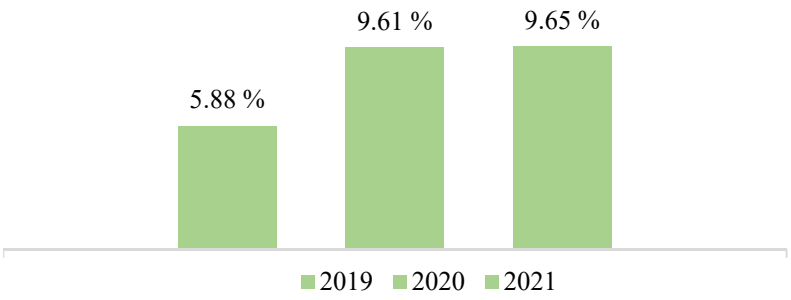

Figure 3. The unemployment rate in Malang (2019–2021). **Source**: CBSM (2021c).

The government of Indonesia is striving to reduce unemployment and foster socio-economic progress. However, the lack of jobs in Malang means that are many people living in poverty, and it should be noted that social welfare institutions are lacking. As reported by the CBSM (2021b), the number of poverty in Malang City reached 40.62 thousand people (4.62 percent) in march 2021, an increase of 1.85 thousand citizens compared to in March 2020 which was 38.77 thousand people (4.44 percent). According to Sarwar (2019) Urban expenditure and income can affect carbon emissions mainly as a result of urbanization. In addition, the city's large income can accommodate environmental and energy-saving management equipment. Additionally, in the research conducted by Sarwar and Alsaggaf (2019) in China per capita income, economic growth can control carbon emissions because an increase in income can allow urban residents to purchase environmental and green technologies that use less energy.

The emergence of the waste bank in Malang impacts society socially, environmentally, and economically. The institution consists of local people who work and resell the results of recycled products. People's income can, therefore, increase by depositing waste to the waste bank, and it can also produce a cleaner or at least less polluted environment. Furthermore, the concept of the waste bank is the bank that purchases usable waste from customers according to the agreed cost. After that, the bank will alter the waste using the 3Re principle, together with other related institutions. Then, the bank sells the recycled waste to factories, companies, and suppliers, assisted by WBM. As mentioned by the Central Government and the Minister of the Environment, the waste bank in Malang is the best waste bank throughout Indonesia (Sari et al. 2020).

As a comprehensive religion, Islam places on human beings the responsibility for preserving the Earth and protecting of it from harmful activities. The concept of *Maqasid al-Shari'ah* is expected to guide people's actions. Humans need to preserve nature and the environment, and every society must support sustainability (Hasan 2006). Allah does not like damage and transgression in the environment (Ahmadi 2016), as mentioned in the Quran (5:64). It should be noted that the WBM applies religious teachings (Ariestyawan 2017; Bakhri 2018) in supporting the prosperity of the surrounding community by applying *Maqasid al-Shari'ah*, a concept that refers to knowing the wisdom of laws that benefit humans. Here, the goal is *maslahah*, or the goodness and welfare of humankind both in this world and in the hereafter. In realizing Maqasid, Islam prioritizes aspects of community welfare and encourages the achievement of the best life, such as in terms of education, economy, health, and ecology (Alam et al. 2015).

Nouh (2012) states that Islamic teachings emphasize a balance in all aspects, including between social and economic development and the environment, in order to preserve the effective and efficient use of natural resources. Humans need to preserve nature and the environment, and every society must support sustainability (Hasan 2006). Thus, waste bank operations should, in theory, be beneficial when analyzed through the lens of *Maqasid al-Shari'ah.* The outcomes should benefit society, and especially the Muslim community. Thus, the purpose of this study is to assess and evaluate the waste bank's operations in Malang from the *Maqasid al-Shari'ah* perspective. This study is important because the findings will encourage people, particularly Muslim communities, to participate in the waste banks' Islamic *Shari'ah*-based programs. If the Muslim community was aware that the *Shari'ah* encourages such WBM-like activities, they would almost certainly be eager to support such undertakings. Thus, this study explores the following: (i) the view of the *Maqasid al-Shari'ah* on waste bank initiatives, and (ii) how waste bank use contributes to socio-economic empowerment in Indonesia.

This paper contributes to the existing literature in multiple ways. Firstly, it is one of the first studies in the context of Indonesia to investigate *Shari'ah* compliance as a waste management instrument. Secondly, this study has used a structured and unstructured interviewed approach to collect data, and analyses expert opinions relating to their faith and waste management as a financial and religious reward in this life and life after. Lastly, it conjugates with the idea of *Maqasid Al-Shari'ah* perspective on waste management. The structure of the rest of this paper is as follows. In the subsequent sections, the literature review on waste management under *Shari'ah* compliance is presented, followed by the research methodology used in to address research question for analyzing descriptive qualitative data collected from primary and secondary sources. Results are presented in Section 5, while the final section contains some concluding remarks.

2. Literature Review and Methods

2.1. The Waste Bank

The waste bank uses a bank-like system to manage waste, where people can earn money by depositing waste that can be sorted and recycled (Suryani 2014). Thus, the waste bank's system is very similar to a commercial bank. In the commercial bank, the customer deposits money, but in the waste bank customer gives waste to the bank (Wulandari et al.

2017). As stated by Singhirunnusorn et al. (2012), a waste bank is similar to a regular bank. However, this waste bank does not provide as many services as conventional and Islamic banks. The waste bank is a social form of engineering that teaches people to sort waste, and it serves to increase public awareness about how to manage waste well and, in the end, to reduce materials that are transported to the landfill (Selomo et al. 2016).

The Minister of the Environment in Indonesia adopted the waste bank concept for settlers to use, as outlined in the Minister Regulation of Environment of Indonesia, No. 13 of 2012, regarding enforcement of the 3Re guidelines for waste management reuse, reduce, recycle (IND-PUU 2012). Meanwhile, in the second paragraph of Article 1, it is stipulated that the waste bank is an institution where the community sorts and collects waste from households and brings it to the waste bank for depositing, where it is recycled and reused into a new product to generate economic value. Besides carrying out waste management awareness of a clean and healthy environment for the surrounding community, waste can be processed into things beneficial to the community, such as handicrafts or fertilizers, which have economic value under government regulations, and mean that certain goods can be recycled. The MEFI provides guidelines to implementers of 3Re activities through waste banks. These 3Re activities through the waste bank are implemented for household waste and types of household waste. In the Regulation of the State Minister for the Environment of the Republic of Indonesia No.13, in the year 2012, p. 154, waste bank were required to, at the least, include the following requirements (IND-PUU 2012): the contraction requirement, the waste bank management standard system, and the procedures and implementation of the waste bank.

The waste bank in Indonesia is different from waste banks in other countries because it has central waste bank in the city and many branches, such a in schools, markets, companies, etc. (Suryani 2014). Additionally, the operation of its waste bank implements Islamic law (Ramayanti 2017) and applies the principles of Islamic finance (Ariestyawan 2017).

In 1999, Thailand officially established the first waste bank in Phitsanulok Province, Bangkok, at the Watpanpi Municipal School through a collaboration between the Bangkok City government and a private recycling buyer Wongpanit (Fang 2020). The institute was founded with a budget of 10,000 baht to buy trash from members. Starting from the waste recycling project in the Klong Toey slum area of Bangkok, the waste bank approach has been developed based on community participation. The Mahasarakhan City Government of Thailand provides financial support by buying the waste that is deposited by the community and then sold to buyers or private agents. Materials will be sold to private buyers, both formal and informal. From the sale of waste, participants will get money from the results of the exchange of their goods (Singhirunnusorn et al. 2012).

The community is independently setting up a waste bank with the support of the Thai City Government. The people who take part in the waste bank program are city waste workers and scavengers. The garbage bank pays the recycler. Depending on the administration, this payment can be in the form of credit or cash. Thailand's waste bank is almost like a bank system. At the beginning of registration as a waste bank participant, the customer gets a savings account. The garbage bank is formed of an organizational structure, administration, and jobs, respectively. Each participant will get results from bank profits at the end of the year, and the way the salary is divided is different for each person (Singhirunnusorn et al. 2012).

Waste management policies in major third world cities utilize advanced technology to increase the efficiency and effectiveness of waste disposal (Singhirunnusorn et al. 2012). Household waste or solid waste management was implemented by many countries. Therefore, it is important to investigate further. A number of studies were conducted regarding this context, such as (Beigl et al. 2008; Visvanathan 2006; Salequzzaman et al. 2001; Lohri et al. 2014; Colon and Fawcett 2006; Nursubiyantoro and Indrianti 2013; Sujauddin et al. 2008; Chakrabarti et al. 2009; Asim et al. 2012; Berneche-Perez et al. 2001; Douglas et al. 1994).

Waste recycling, also known as concept of zero waste (ZW), was used by Plamer (2004) to address resources from chemical waste in 1973. Canberra, New Zealand, was the first location to achieve this target. As a result, several countries implemented the ZW concept, which the New Zealand government also endorsed and implemented the ZW concept in 1997. This concept is heavily advocated as a circular material economy system or closed-loop material economy. This is where a product is made to be reused and recycled, and is an economic system that minimizes and ultimately closes the material economy circle. In such a model, products are made to be reused and recycled, and the economy minimizes and ultimately eliminates waste (Tennant-Wood 2003, p. 46).

The United States state of California implemented the ZW concept comprehensively in 2000, and in the following year, it was used as strategic waste management. The United Kingdom defines ZW as *"A simple way that summarizes the target as far as possible in reducing the impact of waste on the environment. It is a visionary goal that prevents waste generation, conserves resources, and restores material value"* (Phillips et al. 2011). The San Francisco Department of the Environment defines ZW as "*Throwing nothing to landfill or incinerators and establishing policies that reduce waste and increase access to recycling and composting"* (San Francisco Department of the Environment 2011).

Morocco adheres to the 3Re concept through the implementation of a countrywide hazardous waste plan (2008–2022) to maximize waste avoidance and see wastes as resources within a green economic vision. Several acts need to enhance solid waste management, including the professionalization of solid waste collection through private sector involvement, increasing disposal in controlled landfills, and developing new or rehabilitating existing landfills, all of which incorporate a social component. On the other hand, the private sector and non-governmental organizations may involve community or collaborative efforts. Environmental education is another pillar that helps solid waste management by developing specialized courses in schools or universities (Dahchour and El Hajjaji 2020, pp. 16–17).

2.2. Socio-Economic Empowerment

Socio-economic empowerment is the development of policies aimed at solving public problems through the provision of employment and the utilization of community capital to create prosperity, based on local wisdom in order to realize communal justice and the availability of settlements for poverty (Surya et al. 2020). Economic empowerment is increasing the ability of impoverished communities to take advantage of the growth process in conditions that recognize the value of their contributions and respect their dignity (Eyben et al. 2008). Economic empowerment is an empowering woman to compete in the market. The four main markets targeted by the World Bank Action Plan 2006 are also considered, as follows: land, labor, finance, and equity products (DAC Network on Gender Equalit GENDERNET 2011).

Socio-economic empowerment is a process of improving people's welfare from the cycle of poverty and giving them a social role, as well as providing them with resources, such as education, providing employment, health services, and other services to advance their lives. The process is intended to equalize social inequality and support their quality of life in the future. Examples of social empowerment are non-governmental organizations and organizations that target women rather than men with low incomes because they play an important and influential role in the family to influence their socio-economic life, such as teaching them about their rights as human beings, facilitating free education, and teaching women skills for work etc. (Evans 2022).

According to Suharto (2005), empowerment is a process through which individuals gain the ability to participate in, share control over, and influence the events and institutions that shape their lives. Individuals gain the necessary skills, knowledge, and power to define their own lives and those of others. Similarly, Kindervater (1979) defines empowerment as the process of improving one's capacities in terms of knowledge, skills, and attitudes to claim a stake in the social, economic, and political situations to better one's place in

society. Empowerment can be described as an education activity that raises awareness and desire for knowledge, skills, and talents that will eventually develop and increase the community's welfare (Subekti 2018). Empowerment is the process of assisting individuals in becoming empowered, improving their economic situation, and having the knowledge and skills to meet their physical, emotional, and social needs. Having self-confidence, communicating ambitions, having a source of income, participating in social activities, and being self-sufficient in carrying out daily responsibilities become possible (Suharto 2005).

2.3. Maqasid al-Shari'ah

Imam al-Ghazali stated that *Maqasid al-Shari'ah* is an Islamic legal philosophy. Another closely connected ancient theory, *maslahah* (welfare or public interest), has risen to prominence in recent times (Duderija 2014). Imam al-Ghazali also established the concept of *Maqasid al-Shari'ah* for the first time, arguing that *maslahah* was Allah's overarching purpose in disclosing the divine will to preserve the following five pillars of human well-being: faith, soul, intellect, lineage, and wealth (Opwis 2005; for Arbitration Maria Bhatti 2020).

Al-Shatibi (2003) categorizes *Maqasid* into three types, as follows: *daruriyyat*, *hajjiyat*, and *tahsiniyat*. These three components are divided into priority levels, beginning with *daruriyah* and progressing to *tahsiniyyah*. As well as these three aspects, there is a mukmilah (complementary) element, whose purpose is to fulfill the requirements for achieving *daruriyyah, hajiyah,* and *tahsiniyah*. He then classified *dharuriyyah* in more depth, focusing on five objectives, as follows: religious preservation, soul protection, intellect preservation, descendant preservation, and property preservation.

Maslahah consists of *daruriyat, hajiyat, and tahsiniyat*. *Daruriyat* is a necessary stage for promoting the welfare of people, including religious and worldly affairs. When this perspective disappears, the world's and even the hereafter's benefits are lost. *Daruriyat* is critical and must be implemented immediately; otherwise, it will annihilate human life. If this component is not met, it will result in faults and endanger the other two aspects, *hajiiyat* and *tahsiniyat*. Conversely, if the *hajiiyat* and *tahsiniyat* are not observed, the *daruriyat* is unaffected. *Daruriyat* consists of five pillars, as follows: religion, soul, intellect, lineage, and wealth. Together these are referred to as *al-kulliyah al-Khamsah* (Mawardi 2010).

The goal of *Maqasid al-Shari'ah* is to lead to what is desirable from all human actions, such as towards a peaceful and progressive environment and the right direction (*siratul mustaqim*) (Laldin and Furqani 2013). Nouh (2012) The people must not do anything to endanger the rights of future generations, such as damaging the environment due to the consumptive nature of humans today. The importance of taking care to engage in sustainable development, especially to the environment is based in an Islamic perceptive on a responsibility and concern for nature, such as maintaining benefits for all aspects of life including animals and the environment (see Ahmadi 2016) and a recent literature review on the subject issue related to Shariah and waste management by Al Haq and Abd Wahab (2019).

Destruction of nature is prohibited in Islam, such as the immoral depletion and degradation of the environment, because such damage by individuals will have an impact on their own lives and future generations. Failure to protect nature is caused by humans themselves (Al-Jayyousi 2020). According to Ahmadi (2016), humans are as caliphs or managers of nature, not as owners, and maintenance of nature by humans is a good and wise way in all respects to build a better life.

Recently, Rehman and Bhatti (2021) developed a unified model to quantify Shariah Indices for Human Development and Prosperity in line with UN sustainable development goals, which can be used for achieving socio-economics applications of *Maqasid al-Shari'ah*. Islam supports a sustainable economic model to develop the economy, as shown by Ahmed et al. (2017). Islam explains the importance of the economy through the commands of the Qur'an and As-Sunnah (Al Haq and Abd Wahab 2019). According to Chapra (2008), Islam encourages business and economic activities because of Maqashid, namely through the context of social benefits.

In the context of contract in a waste bank, admittedly buying and selling goods that contain najis is not allowed, except for certain purposes when they are not to be eaten. According to the Hanafi and Zahiri schools, it is permissible to buy and sell unclean goods and unclean feces because they are for plantation, agricultural, unclean oil, etc. If the item is not eaten, it is allowed to be traded (Sabiq 1988).

3. Methodology

This study employs a qualitative descriptive method to describe a phenomenon in the field and its characteristics. Various qualitative approaches are designed to have a deep and broad grasp of the issues by developing and evaluating propositions or hypotheses, the most frequent of which are interviews and observations (Creswell 2007). The data collection technique involved triangulation, which allows data to be validated, and is utilized in both quantitative and qualitative research. Triangulation can guarantee that basic biases stemming from using a single technique or observer are addressed by mixing theories, methodologies, or observers (Noble and Heale 2019). The sample uses purposive sampling in the form of a non-probability sampling strategy, which arises when components picked for such a sample are based on the investigator's judgment. Researchers usually determine how to acquire a representative sample by employing good judgment (Black 2019). Additionally, this research uses the snowballing method that uses several of the informants who meet the criteria and contribute to a study (David 2008). This research also investigates the WBM as case study. Its method was also used by some scholars, such as Qomar et al. (2020) in analyzing a similar case. The study interviewed those who are experts closely tied with the waste management industry, such as waste bank managers, government officials, and other stakeholders. Interview questions are attached in Appendix A.

4. Results and Discussion

4.1. Waste Bank of Malang: An Overview

The WBM is a legal entity and functions as a series of cooperatives established on 12 August 2011, with the approval of the Mayor of Malang City, No. 518/18/35,73,112/2011. This waste bank is located at street S. Supriyadi No. 38 A, Sukun, Kec. Sukun, Kota Malang, Jawa Timur 65147, Indonesia. It is a joint legal entity established in collaboration with the Government of Malang through the Department of Cleaning and Landscaping of Malang, in collaboration with the State Electricity Company/PT. The PLN was inaugurated on 15 November 2011with an initial capital of IDR 710.000.000.00. The waste bank has been operating since November 2011, and the members of the cooperative total 25 employees. The WBM has 32,000 customers who manage the waste in 57 sub-districts and implement a waste collection system every two weeks starting Monday–Saturday (WBM 2012).

4.2. The Mechanisms of Processing of WBM

The Figure 4 above shows that the process of waste bank starts at the household, bank unit, and bank center. Firstly, the household waste is sorted into four categories, as follows: rotten organic waste, which can be compost goods, organic waste, which is worth selling, inorganic waste which can be recycled, and rotten mixed waste will be disposed of. The waste collected in the WBM unit is recorded and serves to make handicrafts and is also delivered to the WBM center. At this center the waste is recorded and processed by chopping it up and selling it to factories, industries, and consumers.

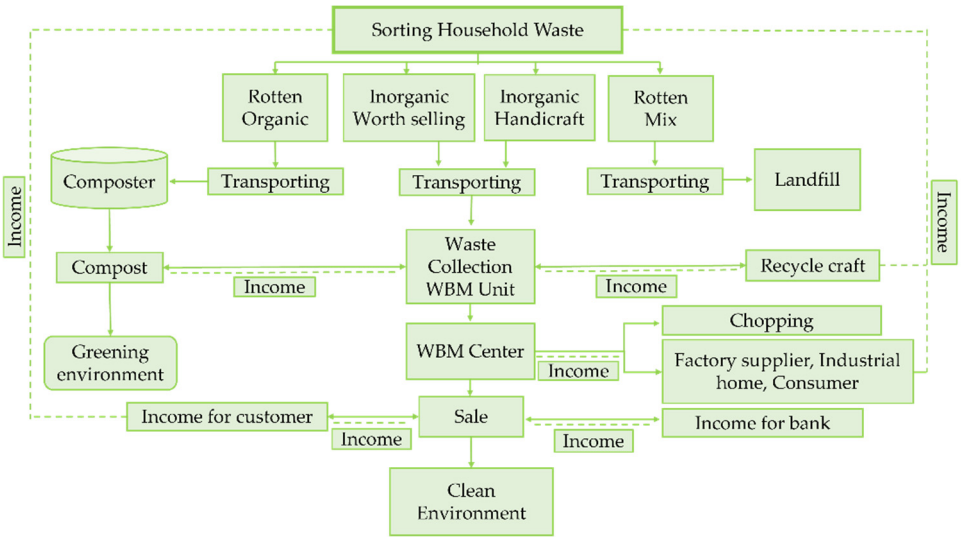

Figure 4. Waste Mechanism Diagram of WBM, adapted from WBM (2012).

The standard price for each type of waste is determined by waste bank management. Prices changes are based on the market conditions for persons who sell waste directly and expect payment. If the client sells collectively to save money, the price remains the same and does not rely on fluctuations in the market price. Profit-sharing is determined at the waste bank administrators' meeting. The current standard is 15% for waste banks as the specific amount taken from the profit because the bank's capital consists of government support, corporate social responsibility (CSR) objectives of the State Electricity Company (PT. PLN), and other organizations. The profit for consumers is 85% in order to encourage people to participate and motivate others to join the waste bank program. A client earns money generated from the waste they dump at any period agreed upon or at least three months afterward (WBM 2019).

The work of the WBM is to collect and receive as much organic and inorganic waste as possible from each household. The waste is sorted according to its type, weighed, and exchanged for a certain amount of money that can be taken in cash or deposited for at least three months. Waste bank opens a savings book account for the customer and the financial administration is generally well organized and fully disclosed.

4.3. The Analysis of Waste Bank of Malang from the Perspective of Maslahah

In this section, the waste bank is analyzed through the *maslahah* viewpoint regarding public interest and harm. Additionally, this section studies and classifies the *maslahah* pyramid. Based on findings from MCES/DLH Kota Malang and interviews, a waste bank based on the *Maqasid al-Shari'ah* perspective functions as follows. The waste bank's efforts have a positive environmental effect by cleaning it up and, most crucially, eliminating waste piles in the surrounding region, which have been an eyesore throughout Malang for years. The waste bank funds education and, additionally, individuals may obtain knowledge, insight, and skills, such as sorting, reducing, and recycling waste. Furthermore, the waste bank provides training, workshops, internships, and seminars on recycling waste to establish a creative economy, especially of interest to students from elementary to high school levels, as well as the public. Waste bank concepts, such as interest-free savings, interest-free credit, and profit-sharing, affect the community's application of religious teachings, so that the ruse of riba, or interest, is discouraged. The Table 1 below describes the analysis of waste bank from *maslahah* and mafsadah. Also the Figure 5 represents the analysis of a waste bank based on the *maslahah* pyramid.

Table 1. The analysis of a waste bank based on *Maslahah* and *Mafsadah*.

Public Good (*Maslahah*)	Prevent Harm (*Mafsadah*)
○ Economic empowerment	○ Poverty
○ Islamic-based contracts	○ Climate change
○ Interest-free savings	○ Disease
○ Interest-free capital	○ Bad governance
○ Profit-sharing	○ Disease burden in the environment
○ Clean and good environment	○ Unemployment
○ Protect the earth	○ Pollution of indoor air
○ Prevent illness	○ Particulates from other cities
○ Social solidarity	○ Ozone depletion in the region
○ Good governance	○ Ozone at the local level
○ Knowledge and skills	○ Emissions of sulfur dioxide
○ Social welfare	○ Index of conservation risk
○ Socio-economic progress	○ Poor conservation practices
○ Avoid interest payments	○ Index of water quality
○ Increase employment	○ Water tension
○ Better distribution of justice	○ Conservation of critical habitat
○ Fulfillment of needs	○ Inadequate sanitation

Source: Author's compilation.

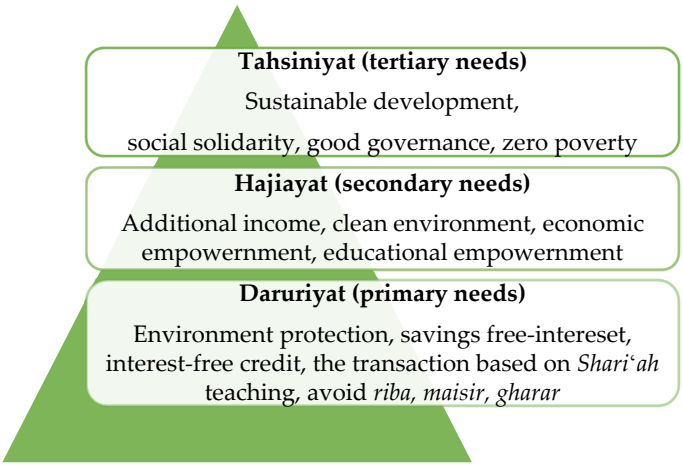

Figure 5. The analysis of a waste bank based on the Maslahah pyramid, author's compilation.

4.4. The Analysis of Waste Bank from the Perspective of Religion

Often, religion and the environment are considered in isolation. A better understanding has grown where it is now recognized that there is a close interaction between religion and the environment, notably in how a faith influences people's conduct in how they treat the natural environment. A detailed religion teaches people to recognize and respect the need for environmental protection, since any natural disaster will have long-lasting effects on a community, stated in the Qur'an as follows: *Corruption has appeared throughout the land and sea by [reason of] what the hands of people have earned so He [i.e., Allah] may let them taste part of [the consequence of] what they have done that perhaps they will return [to righteousness]* (Holy Qur'an 2019, p. 41).

Furthermore, the WBM program typically helps members implement their religious teachings (Ariestyawan 2017), which are transactions based on *al-Shari'ah*, which prohibits the payment of interest. The Almighty Allah states that "*Allah permitted commerce, and He prohibited usury*" (Holy Qur'an 2019, p. 276). The implementation of waste bank management programs focuses on increasing the fondness for saving waste through a savings system through which the waste is deposited wisely. The WBM buys waste at a price agreed by both parties. The waste is deposited with the *wadiah* contract, where its sale contract does not require interest on savings and a discounted fee for administration. It is

associated with *Maqashid al-Shari'ah,* otherwise known as the *maslahah* principle. The waste becomes money and represents a benefit by being managed by a *mudhorib* (waste bank) as a *qardhul hasan* for the member who needs it. Allah stated in the Qur'an, as follows: "*O you who have believed, do not consume one another's wealth unjustly but only [in lawful] business by mutual consent. And do not kill yourselves [or one another]. Indeed, Allah is to you ever Merciful*" (Holy Qur'an 2019, p. 29).

4.5. The Analysis of Waste Bank from the Perspective of the Soul

A waste bank focuses not only on environmental protection, but also ensuring the protection of the psychic aspects of human life and people's safety. Waste causes environmental destruction and pollution, reduces or ends finite natural resources, and endangers human life. The more exploitation of this fact, the greater the threat to human souls on earth. This is because waste can cause natural disasters, such as flooding, landslides, disease emerges, damaged ecosystems, etc. Regarding the importance of a human's self and soul, Allah SWT stated the following: "*Because of that, we decreed upon the Children of Israel that whoever kills a soul unless for a soul or corruption [done] in the land it is as if he had slain mankind entirely. And whoever saves one it is as if he had saved mankind entirely. And Our messengers had certainly come to them with clear proofs. Then indeed many of them, [even] after that, throughout the land, were transgressors*" (Holy Qur'an 2019, p. 32). Additionally, according to Chapra (2008), for a person to have a true sense of welfare, one needs to have a healthy soul to carry out the good life. The soul's protection may be accomplished by fulfilling its primary requirements through its role as a leader (caliph) and distributing welfare and proceeds of business to others.

4.6. The Analysis of Waste Bank from the Perspective of Intellect

The blessing of reason given by Allah to humans elevates them to the highest level of living creatures. Executing *Shari'ah* and Allah's generosity is difficult to do. However, if human brains are not functioning correctly and cannot distinguish between what is declared right and what is wrong, human beings are no different from animals, and attempts to sustain human existence would fail. As a result, the Qur'an frequently queries human behavior with the following wording: *"Don't you think?"* Most humans desire to damage the environment for their own ends, and they should have a greater awareness of managing waste and its relationship to the environment. According to the interviews, the waste bank system teaches the public how to increase their understanding of household waste through sorting, training, workshops, comparative studies, and seminars. Thus, it is consistent with the objective of *Maqasid al-Shari'ah,* which is to seek knowledge and preserve one's intellect, as stated by Chapra (2008). Additionally, the concept of the savings program and the supply of interest-free credit is implemented through counseling, monetary support, and scholarships which help deserving students whose schools collaborate with WBM, and especially assist low-income families. Through CSR funds, WBM collaborates with other companies. Consequently, several schools in Indonesia have implemented a system of paying school tuition through waste savings (Rahayu 2016).

4.7. The Analysis of Waste Bank from the Perspective of Offspring

Maintaining the environment is also part of protecting one's offspring and all other descendants in this world. Therefore, protecting the environment means protecting future generations. Unmanaged waste devastates the ecosystem and endangers future generations. Waste management treatment will result in a clean and healthy environment, which will help the next generation's quality of life. Uncontrolled waste will undoubtedly contribute to environmental issues such, as industrial pollution, pesticides, transportation issues, erosion, floods, and drought-driven catastrophes. All these problems result from human activities and not caring for the environment. A waste bank strives to promote sustainable development and a circular economy so that natural resources are conserved and maintain

a healthy and clean environment for future generations. The Figure 6 below illustrates the training program held by WBM for students and youth organizations.

Figure 6. Waste training for students in WBM, by WBM (2021).

Based on this explanation, it can be concluded that a waste bank is consistent with the concept of *Maqasid al-Shari'ah,* which is the preservation offspring, which has to be sustainable in the long-term.

4.8. The Analysis of Waste Bank from the Perspective of Wealth

A waste bank can preserve wealth because it has a savings program that can meet human beings' most basic needs, namely protecting their material goods or property, as Allah stated in the following: "*And do not give the weak-minded your property, which Allah has made a means of sustenance for you but provide for them with it and clothe them and speak to them words of appropriate kindness*" (Holy Qur'an 2019, p. 5). Additionally, the waste bank can empower the community economically by raising the community's income and overall wealth. According to Chapra (2008), wealth is a facility of Allah's grace given to humans to support their main responsibility as caliph on Earth. Wealth is a trust which needs to be distributed in a planned manner to eliminate poverty, meet the basic needs of everyone, and make life comfortable so that everyone has access to a legitimate income.

4.9. The Contribution of Waste Bank to Socio-Economic Development of Malang

4.9.1. The Role of the Waste Bank in Empowering the Economy

The role of the WBM in developing the economy is not inseparable from the collaboration between the government and community. In this way, it can provide economic advantages, benefit people, and be environmentally friendly. What follows is a description of the collaboration between the waste bank, government, and society.

The intercepts noted in the Figure 7 above (a, b, c, and d) demonstrate that there is a synergy between the waste bank, government, and society in terms of economic development, as follows:

(a) Establishing partnerships between society's components (individuals, communities, organizations, and schools) and waste banks means taking an active role in waste management.
(b) The government's synergy with waste banks leads to a clean environment and boosts income.
(c) Collaborating with society, the government can improve human resources and raise public awareness about waste reduction.
(d) Cooperation between all stakeholders (community, waste bank, and government) is essential for economic empowerment.

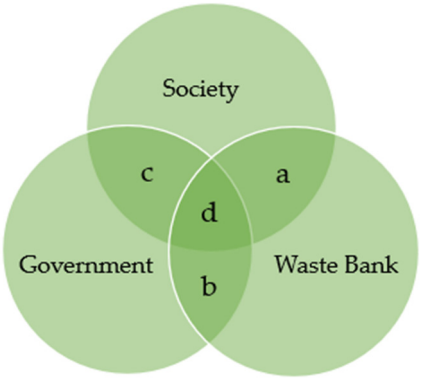

Figure 7. Synergy of the waste bank, society, and government, adapted from Wulandari et al. (2017).

4.9.2. Economic Value of Waste Banks

The economic value and contributions made by waste banks nationally are shown in Figures 8–10 below. The growth of the economic value of WBM appears to be quite slow during the period because some Indonesians did not support the waste bank management concept, and most people did not care about the environmental pollution that surrounds them. For this reason, the government of Indonesia is striving hard to educate the community about the value of waste banks through various initiatives.

The Figure 9 above demonstrates the number of waste banks from 2014 to 2020. It seems to be rising all the time, starting from 2014 with 1.172 waste banks in 2014, followed by 3.075 units in 2015, and, going as high as 11.330 waste banks in July 2020 (Usis 2021). The number of waste banks in 2020 continued to grow despite the COVID-19 pandemic because people were still interested in depositing waste materials sourced from their households and had to have a job, so they participated in the waste bank. The MEFI developed the concept of the waste bank in several provinces, including Java, Sumatera, Kalimantan, Maluku, Bali, and Sulawesi.

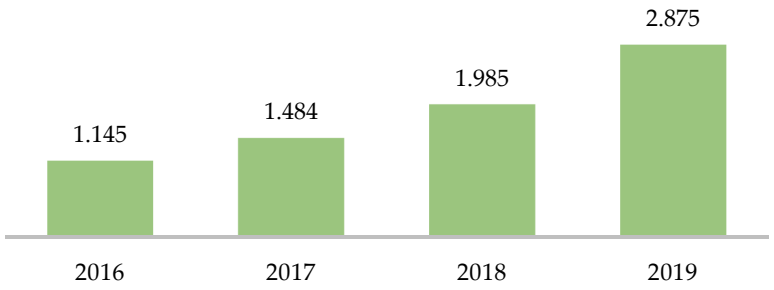

Figure 8. The economic value of waste banks (2016–2019) in billions IDR, according to the Ministry of Environment and Forestry of Indonesia/MEFI (2019a).

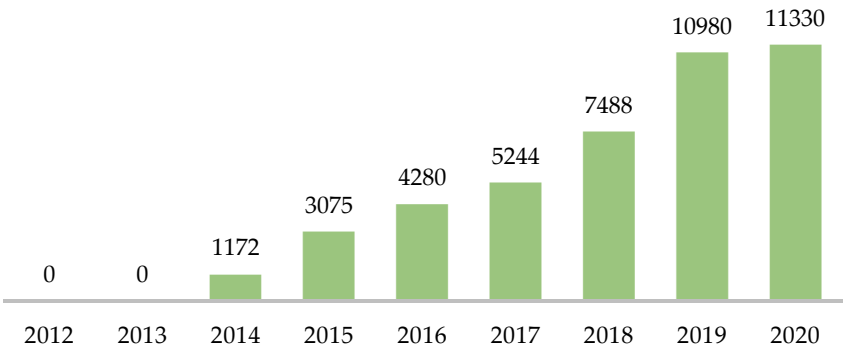

Figure 9. The total number of waste banks in Indonesia for 2014–2020. (MEFI 2019b; Usis 2021).

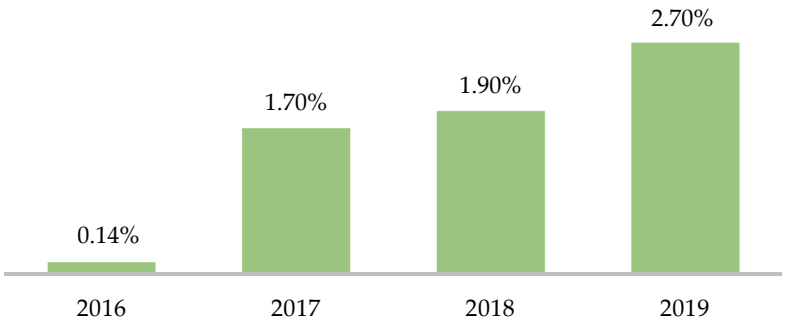

Figure 10. The contribution of waste banks to Indonesia's economy (2016–2019), (MEFI 2019b).

The Figure 10 above displays the contribution of waste banks to Indonesia's national economy based on gross domestic product (GDP) from 2016 to 2019. Overall, the graph has stayed consistent or grown through the years, from 0.14% in 2016 to 2.70% in the last documented year of 2019. The WBM is the best waste bank in Indonesia as it is making a huge contribution to society. According to the interviews and data from WBM, its waste bank is empowering the community. This is in line with the research conducted by Usis (2021), which stated the best waste bank in Indonesia regarding socio-economic and environmental improvement is the waste bank in Malang. The development, innovation, and modification of WBM through a central system in the city and unit branches also helped WBM become the best waste management institution in the Asia-Pacific region (Suparjo 2019).

The impact of the waste bank on Malang's community economy is evident by the fact that it won the autonomy award from The *Jawa Pos Institute* of *Pro Otonomi* (*JPIP*) (Lestari 2018). It also won the silver medal for economic empowerment and achievement of the Indonesian government's Adipura Kencana award in 2015, especially waste management. This confirms that the WBM has been positive for the Malang community. Additionally, Malang was honored by the Ministry of Environment and Marine Affairs (Kementerian Lingkungan Hidup dan Kelautan/KLHK) with a waste reduction award in 2021 (Kota Malang Raih Penghargaan dari KLKH, Kesuksesan Program Pengurangan Sampah 2021). The ranking is based on the cities and/or district's waste sorting and reduction implementation schemes. These successes result from the Malang municipal environment agency's collaboration with the community in the waste reduction program.

4.9.3. The Financial Analysis of Waste Bank of Malang

The income that WBM earns results from sales of its operational division, production division, household division, government grants, and CSR plans of the electricity company. Meanwhile, the expenses of the WBM come from capital goods, and general operating expenses. The WBM makes money by selling waste items, such as raw materials, recycled crafts, plastics, chopped up materials, etc. Raw materials are generally non-shredded plastic products, such as metal, paper, or glass bottles. After being processed by WBM, this raw material is sold straight to palm shops/collectors/factories.

Table 2 below lists the prices of raw materials in WBM for 2019. It shows that the most expensive form of waste is aluminum and copper, costing around IDR 16,000. The most affordable waste pricing is determined by plastic and bottle/glass type. The cost of waste in the waste bank is subject to change at any time. This is because the market price of waste is not static. Pricing fluctuates in lockstep with collectors' prices in general or how much they are willing to pay. However, the consumer is alerted when the price changes.

The Income Statement of WBM. The WBM's revenue statement from 2016 to 2019 indicates the following items: waste sale of the operational division, waste sale of the production division, household division, government grant, and CSR initiatives of the State Electricity Company.

Table 2. The price of waste in 2019 (in IDR).

No.	Type of Plastic	Price	No.	Type of Bottle/Glass	Price
1	Clear Plastic	2.000	1	Glass Bottle	1.000
2	Dirty Plastic	600	2	Drink Bottle	1.000
3	Screen Printing Plastic	400	3	Orson drink bottle	600
4	Thin plastic	350	4	Bottle of Soy Sauce/Big Sauce	650
5	Small Atum Bottle	3.000	5	Gasoline Bottle	550
6	Glass Bottle	3.500	6	Beer Bottle	500
7	Mixed Plastic	3.500	7	Coca-Cola Bottle	200
8	Cable Skin	2.000	No	Type of Copper	Price
9	Hose	900	1	Ordinary Copper	90.000
10	Carpet	500	2	Super Copper	95.000
11	Color Bottle Caps	2.500	No	Type of Zinc/Iron	Price
12	Clean Color Drink bottle	3.000	1	Good Zinc	300
13	Dirty Color Drink Bottle	2.000	2	Ordinary Zinc	3.000
No	Type of Paper	Price	3	Good Iron	4.000
1	Ordinary book	2.500	4	Ordinary Iron	3.000
2	HVS Paper	2.600	No	Type of Aluminum	Price
3	Newspaper	2.600	1	Slender Cop	11.000
4	Building Paper	3.000	2	Antenna/Pot/Frying Pan	8.000
5	Magazine	1.000	3	Plate	12.000
6	Duplex Printing	900	4	Aluminum Bottle Cap	5.000
7	Good Cardboard	2.000	5	Bronze	9.000
8	Bad Cardboard	1.900	6	Monel	16.000

Note. The price can fluctuate (Data processed from WBM 2019).

Table 3 summarizes the inflow generated by WBM revenues between 2016 and 2019. It shows growth in total sales and operating income from 2016 to 2019. It reflects an annual rise in the operational division, starting from IDR 1.217 million in 2016 and rising to IDR 1.900 million in 2019. The manufacturing sector had IDR 1.255 million in 2017, owing to the hard work of all the staff. However, in 2018, IDR 949 million marked a drop, due to a lack of absorption of production outcomes. In 2019, the production division increased by IDR 1.173 million, due to the work being boosted by government-sponsored awards. The household division continued to grow year by year due to the division's efficiency and creativity. In aggregate, all categories rose over the period.

Table 3. The income of WBM during 2016–2019 (in millions of IDR).

No.	Description / Revenue	2016	2017	2018	2019
1	Waste sales of the Operational Division	1.218	1.486	1.793	1.901
2	Waste sales of the Production Division	1.100	1.256	950	1.174
3	Waste sales of the Household Division	545	688	989	1.790
4	Government Grants and CSR of the Electricity Company	110	276	388	550
5	Total	2.972	3.705	4.119	5.484

Data processed from WBM (2019).

WBM Operating Expenses. Expenses are the expenditures incurred by WBM. These consist of capital goods and general running expenditures (staff wages, maintenance, loan payments, and office equipment).

Table 4 below presents the growth in WBM expenditure from 2016 to 2019. The statistics on expenditures reveal a rise in capital goods every year owing to more purchases of waste. General operational expenditures grew due to an increase in the number of WBM personnel, artisans, maintenance costs, debt payments, and office equipment.

Table 4. WBM expenses 2016–2019 (in millions of IDR).

No.	Description	2016	2017	2018	2019
	Expenses				
1	Capital goods	19	23	23	25
2	General operating expenses	2.766	2.996	3.312	4.543
3	Total Expenditure	2.785	3.019	3.335	4.569

Source: Data processed from WBM (2019).

The Cashflow of Waste Bank of Malang 2016–2019. The cashflow is generated from the ratio between income and expenditure. Consequently, the cashflow may be estimated as follows.

Table 5 shows that the cashflow of WBM over the period 2016–2019. Overall, the cashflow result seems to have increased throughout the years. Therefore, the WBM is deemed to be a viable institution in the long term.

Table 5. WBM cashflow 2016–2019 (in millions of IDR).

No.	Year	Inflow	Outflow	Cashflow
1	2016	2.972	2.785	188
2	2017	3.705	3.019	686
3	2018	4.119	3.335	783
4	2019	5.484	4.569	915

Source: Data processed from WBM (2019).

4.9.4. The WBM Program for Empowering the Economy

The economic strategy implemented by WBM for the community is based on how WBM can increase people's incomes. Each member has their own level of socio-economic well-being based on their level of participation. The role of WBM in empowering people can increase the community's income. A customer's savings is, at most, only IDR 767.500. Meanwhile, the customer's savings are, at the least, IDR 60.000. The impact of WBM on the community is enough for customers' daily needs because of the community's average income, which in the first three months amounted to IDR 12.975.000. Nonetheless, the waste bank's effect in improving artisans' income is highly successful, as can be seen by the salaries or compensation paid to artisans. The following illustrates the craftsman's earnings (WBM 2019):

a. Wash coffee packs and related types of IDR 7.000 per kg.
b. Wash oil pack and related types of IDR 700 per kg.
c. Chopping IDR 12.000 per kg.
d. Daily sewing IDR 27.000 per day.
e. Wholesale IDR 2.000 to IDR 12.000 depending on the production type.
f. Weaving IDR 5.500/100 packs.
g. Sewing webbing IDR 3.000/100 packs.

Artisans can earn IDR 700.000–1000.000 rupiah per month. However, artisans might make up to as much as IDR 1.300.000 each month if consumers have many orders to be fulfilled. Besides economic empowerment, the waste bank helps society through segregating waste from households, training schemes, workshops, internships, and seminars on recycling waste, interest-free savings, and interest-free credit. This scenario is consistent with the research conducted by Lestari (2018), which concluded that waste management activities positively help the community because they can be used as income for education costs. The existence of a waste bank may result in creating new jobs. This finding agrees with Linawati et al. (2017), who discovered that the management of a waste bank is good for the socio-economic future of the community, despite some technical issues existing. Furthermore, homemakers with lots of spare time might profit from a waste bank as a source of making additional money.

Regular savings, education, grocery, environmental concerns, and health savings are deposit programs fostered by the WBM. Those deposits can be used as extra income for paying for things, such as school fees, electricity bills, and healthcare costs. However, profit-sharing is not consistent or maximized, since the price of waste tends to fluctuate. The bank's liquidity is insufficient. As a result, WBM collaborates with the MCES/DLH Kota Malang and the CSR scheme of the State Electricity Company (PT. PLN) to meet liquidity requirements. The goal of interest-free credit, regardless of the form of loan granted, is to help customers build their businesses, and to pay for healthcare and school tuition bills. Community members may build their businesses independently through interest-free credit, and poor students can also get loans to cover their school costs. They may make practical payments with delivering waste rather than paying with money. Meanwhile, the challenge of interest-free credit is that since 2018, there has been an increase in high non-performing loans.

5. Conclusions and Recommendations

The analysis of WBM on socio-economic empowerment from the perspective of *Maqasid al-Shari'ah* can be concluded as follows. A waste bank is an institution that aims to reduce waste as much as possible in order to realize maximum cleanliness, turning waste into economic value, and empowering people in the community to have good skills and the potential to realize benefits and prevent harm. It can function under the *maslahah* or goodness and welfare of humanity and the five *Maqasid al-Shari'ah*, preserving religion, soul, intellect, lineage, and wealth. The waste bank delivers training, internships, seminars on recycling waste, interest-free savings, and interest-free credit arrangements.

This study recommendations that the government should develop a waste management policy and waste bank by integrating the concept of *Maqasid al-Shari'ah* and consider any community aspects. Second, WBM should better address the implementation of *Maqasid al-Shari'ah*, especially the preservation of the soul, to make the process of waste collection safe and ethical. Third, the Government and waste bank should devise safety measure regulations for waste collection. Fourth, the government's role should be more active in mobilizing funds for waste banks. Fifth, the government should seek sponsors or corporate social responsibility (CSR) funds to collaborate with WBM on waste treatment and management. Sixth, to increase awareness among the young generation, especially millennials, in waste management, the WBM and related parties should organize competitions for school-aged students regarding effective waste management. Seventh, the outreach of the WBM should be expanded by collaborating with various community and organizations supported by local governments. Eight, WBM should have strong ties with the government to develop innovations in community-based waste management strategies. Finally, WBM should enhance its recycling training operations to boost products' pricing and engage with other parties, such as colleges, craft institutions, etc.

Limitation of the Study and Suggestions for Future Research

Due to time and cost constraints, this study primarily focuses on WBM, which is in Malang, Indonesia. Future research could focus on waste bank management more comprehensively by analyzing the effectiveness of waste banks in other parts of the country, in other countries, and assessing the factors affecting the performance of waste banks. The focus should be on the processing, management, and marketing of waste, generating enthusiasm and public awareness on how to manage waste wisely.

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Abbreviations

The following abbreviations are used in this manuscript:

CBSM	Central Bureau of Statistics of Malang or "*Badan Pusat Statistik Kota Malang (BPS Kota Malang)*" CBSM/BPS
CSR	Corporate Social Responsibility
MEFI	Ministry of Environment and Forestry of Indonesia
NPV	Net Present Value
WBM	Waste Bank of Malang
ZW	Zero Waste
3Re	Reduce, Reuse, Recycle

Appendix A

Table A1. Sample Questions and respondents answers.

Question (Q)1. How is the role of the waste bank in empowering the economy of the community?
Response: "The role of the waste bank for the society's empowerment is increasing the communiti's income when exchanging waste in the form of money collected in the account book owned by them, and also the community becomes aware of the importance of cleanliness and utilizing waste into economic value. Beside, it is to make the environment clean and toward sustainable development".
Q2. How does waste bank affect socio-economic empowerment?
Response: "The respondance said that zero waste regulation can change the public's perspective on the waste that has economic value. Some interviewees said that zero waste bank in Malang can provide alternative jobs and reduce unemployment in the city. They said that waste bank could assist and help their daily need as well as their business through saving and credit without interest. They added that the waste bank not only provides economic emowerment to the community but also that it provides education empowerment through waste recycling training, seminars, and others".

Table A1. *Cont.*

Q3. What is the purpose, role and concept of waste bank based on Shari'ah?
Response: "The purpose of the waste bank in Malang is to anticipate the mountains of waste in the Supit Urang landfill. On the other side, establishing this waste bank aims to build public awareness in managing waste properly while campaigning to reduce, reuse, recycle. Therefore, the Malang city government decided to control waste management through Regulation No.10 of 2010 in Malang city. *The Government's role of Malang through the Malang City Environment Service assisted the waste bank by providing equipment like waste trucks, carts, plastic chopping machines, and the construction of warehouses. On the other side, Individuals and communities can establish a waste bank unit under the guidance of the waste bank center, therefore, can provide a new job and economic value from waste recycling.* *In ten years for development and assistance on waste management through waste banks, by the end of 2019, there were 270 waste bank units in Malang and provided part-time, full-time, and volunteer jobs. The basic principle of waste bank is to invite the community to reduce waste from the source, sort it from households and then sell/save it in a waste bank and have a shared slogan, change waste into rupiah, and turn problems into blessings."* *"The concept of savings in waste bank is like the Shari'ah bank system; However, what is deposited is not the amount of money, but the waste and the savings without interest system, which is haram in Islam. When customers sell their waste, the waste bank will record the sales in a savings book provided by the waste bank. The deposit can depend on the contract or agreement between the customer and waste banker".*
Q4. What is the program of waste bank in empowering the economy?
Response: "The waste bank program in empowering the economy consits of deposit and credit, beside that it has educational empowerment through workshop, internship, comparative study, socialization, and recycling tryning". *"Waste sorting is very easy. Besides that, the waste can be deposited in a waste bank and get value in the form of money".*
Q5. What is the role of the waste bank in preserving the environment?
Response: "The main mission of this waste bank is reducing the amount of waste generated that is transported to the Final Processing Site (Supit urang), utilizing waste into useful goods with economic value, changing people's behavior in managing waste properly and environmentally friendly".
Q6. How is the impat of waste bank to the society?
Response: "Besides aiming to help the community's economy, the existence of this waste bank improves people's quality of life and creates a clean environment". *"This empowerment concept is very beneficial for the environment and a learning method for future generations to build sustainable development."*
Q7. How is the role of waste bank to the community?
Response: "Waste bank is managed using a system similar to banking which is carried out by volunteer officers. The main purpose of establishing a waste bank is to help handle waste processing and the next purpose of a waste bank is to make people aware of a healthy, neat and clean environment".
Q8. How does the waste bank educate and empower the community?
Response: "Most interviewees respond positively and feel good with empowerment provided by WBM because they get insight and knowledge. Besides, the training, workshop and seminar are an essential aspect of increasing the community's lack of awareness and improving the community's skills".
Q9. How does the waste bank implement the religious teaching and the transaction based on Shari'ah?
Response: "Transaction in waste bank applys Islamic finance such as the concept of savings and credit without intereset system that is prohibited in Islam thees contract similar with the transaction in Islamic bank like wadiah and qordul hasan contract. The rules of our waste bank also does not administer gharar and maisir as well as Selling when the Friday Adhan is called. Beside that, its purpose to assists the community especially the poor peaple to fulfiill their need".
Q10. Where is the capital and income of waste bank from? Our waste bank get assistant from the Malang city government
Response:"The capital and income of waste bank assısted from Government, corporate social responsibility (CSR) of the State Electricity Company (PT. PLN), and other organizations".
Q11. What are the advantages of deposit, and what is the role of a waste bank for your family?
Response: "Saving in a waste bank has many benefits, for example, making a clean environment, improving the awareness of the community to care about cleanliness, and returning the waste into economic value. The waste can be exchanged and saved for money. We are also learning how to sort the waste according to its type, so the price will be higher if we sort it by type". *"The existence of a waste bank can improve my family's income, even though the money got is not much. I have extra income, such as paying for electricity, water, and school fees for my children".*

Table A1. *Cont.*

Q12. How much income do you earn from waste saving and for what do you spend its income?
Response: "I earn money from waste bank around 700–1000 thausand rupiah per month (Customer)". *"We get income around IDR 1.300.000 per month if we have many orders (Artisans)".* *"It is enough to buy the household goods as well as for school fee"*
Q13. What are the benefits of saving waste?
Response: Most respondents said that recycling training could open new opportunities for the community to create new jobs. Further, some of them said that it could advance the nation economically and reduce the number of unemployed. The interviewees' customers stated that the recycling craft can improve little family's income even though it is not much, for instance, for their children's school fees, electric payment, and the cost of sick.
Q14. How many savings does waste bank provide and what are they?
Response: "There are five type of saving in waste bank which are regular savings, education savings, groceries savings, environmental savings, and health insurance savings".
Q15. How does profit sharing system apply in waste bank?
Response: "The profit sharing of waste bank here used the rule from Ministry of Environment and and Forestry of Indonesia which is 15% for the waste bank, and 85% for the customer. The profit sharing for customer is higher than waste bank because waste bank has supported by government and corporate social responsibility (CSR) objectives of the State Electricity Company (PT. PLN). This system also for encouraging the people to participate in the waste bank program and to motivate them to care in environmental problem".

Note

[1] Malang is city in Indonesia and is well known for its mild climate and as a popular destination for European and international tourists, due to its various historical relics.

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