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THE IMPACTS OF CASH WAQF LINKED SUKUK EMPOWERMENT PROGRAMS: EMPIRICAL EVIDENCE FROM INDONESIA

Aimatul Yumna[1], Atika Rukminastiti Masrifah[2], Dadang Muljawan[3], Feri Noor[4] and Joan Marta[5]

[1] Universitas Negeri Padang, Indonesia, aimatulyumna@gmail.com
[2] University of Darussalam Gontor, Indonesia, atikamasrifah@unida.gontor.ac.id
[3] Bank Indonesia, Indonesia, dmuljawan@bi.go.id
[4] Bank Indonesia, Indonesia, feri_noor@bi.go.id
[5] Universitas Negeri Padang, Indonesia, joan@fe.unp.ac.id

ABSTRACT

This study analyzes the impact of Cash Waqf Linked Sukuk (CWLS) empowerment programs on beneficiaries' welfare, financial inclusion, social participation, and spirituality. Using questionnaires administered to the beneficiaries and non-beneficiaries of the empowerment programs in Central Lampung, South Tangerang, Trenggalek East Java, and Bima Nusa Tenggara Indonesia, the study constructs three impact indicators: the welfare index, financial inclusion index, and social and spiritual index. The data are analyzed using the difference-in-difference (DiD) method, where the three impact indices are compared between the two groups of respondents in 2021 and 2022. We find that the CWLS empowerment programs improve the welfare and financial inclusion of beneficiaries but have no discernible effect on social and spiritual participation. However, the DID analysis reveals that the overall impacts of welfare, financial inclusion, and social and spiritual participation are not statistically different between beneficiaries and non-beneficiaries in 2021 and 2022. This study provides significant implications for policymakers and *nadzir* to enhance the impacts of CWLS on socioeconomic development and poverty alleviation.

Keywords: Cash waqf linked sukuk, Impact study, Productive waqf.
JEL classification: D64; L30; O10; O35.

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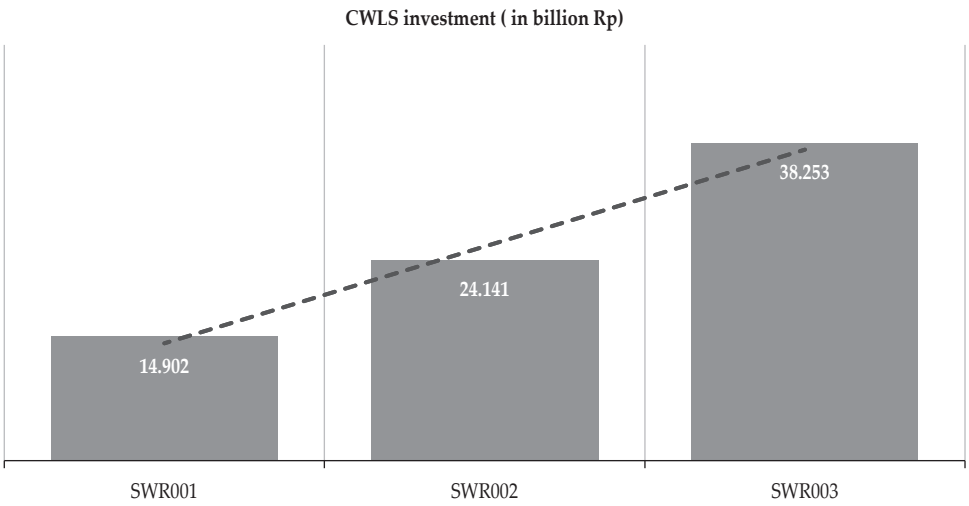
I. INTRODUCTION

Cash Waqf Linked Sukuk (henceforth, CWLS) is an innovative Islamic social financial instrument specifically targeted at supporting the development of cash waqf in Indonesia. Launched in November 2020, the CWLS combines the features of sukuk with the concept of cash waqf to create a unique and impactful financial product. It has the potential to significantly impact social investment and economic development (Fauziah et al., 2021). In the CWLS scheme, sukuk instrument proceeds are used to fund initiatives or endeavors with social or philanthropic goals through waqf arrangements (Bank Indonesia, 2021). Islamic investors can participate in socially conscious and philanthropic initiatives to contribute to social economic development in Indonesia.

Since its inception, the Ministry of Finance has issued three CWLS series: SWR001, SWR002, and SWR003. Based on the CWLS report, there is an increase in investment from CWLS SWR 001 to SWR 002 of 62%, and subsequently, an increase in investment for SWR 003 of 58.5%. According to the number of investors or waqifs, SWR 001 drew in 1037 individual waqifs and four institutional waqifs; however, for SWR 003, there was a significantly smaller number of waqifs—687 individual waqifs and one institutional waqif (Bank Indonesia, 2021). The decline in the number of CWLS investors from SWR 001 to SWR 003 indicates little interest in this instrument from potential investors and larger communities.



Source : The ministry of finance,, 2022

Figure 1.
The Development of CWLS Instrument

The CWLS is a social financial instrument that targets specific investors, namely, investors who prefer social returns to financial returns. The social returns refer to the positive and measurable social impacts or benefits generated by a particular initiative, project, program, or investment (Agrawal & Hockerts, 2021).

It represents the value or improvement in social well-being, positive changes in people's lives, and overall improvement of communities resulting from the implementation of a specific action or intervention (Agrawal & Hockerts, 2021). Information related to social returns is very important for investors to make decisions about their investments in CWLS. As suggested by Putri et al. (2020), the main strategy for enhancing community participation in CWLS is to increase public understanding of the social impact of programs.

However, studies on the impact of CWLS are limited. Moreover, existing studies on the effects of CWLS employ predominantly qualitative and explanatory techniques and rely on secondary data obtained through library research. For instance, Tanjung and Windiarto (2021) find that CWLS contributes to economic development, particularly infrastructure development, and is a substitute low-cost source of funds that banks can use to provide trade financing to cooperatives. Siswantoro (2022) also opines that the CWLS model has the potential to be an alternative source of new funding for micro small enterprises, especially in helping them during the pandemic. Another study by Fauziah et al. (2021) also states that the CWLS helps the government finance numerous initiatives and projects, such as infrastructure improvements and acquisition of medical supplies and consequently social welfare.

The scope and methods of earlier studies have not addressed the CWLS impact on recipients. To fill this gap, this study assesses the impact of CWLS on the welfare, financial inclusion, and social inclusion of beneficiaries. To the best of our knowledge, this is the first study to provide empirical evidence of CWSL empowerment programs. To measure these impacts, this study uses the different-in-different (DiD) method, which allows the estimation of the causal effect of a treatment or intervention by comparing the changes in outcomes between two or more groups over time. The DiD is normally used for program evaluation to assess the impact of a policy or treatment.

The study on the impact of the CWLS program has very important implications for the development of the waqf sector in Indonesia as it provides information for CWLS investors about the benefits of CWLS return. Measuring and understanding the impact of CWLS is also crucial for waqf organizations, governments, and investors involved in this program because it enables them to assess the effectiveness of their interventions, make informed decisions, and allocate resources to projects that deliver the most significant positive impacts on society.

II. LITERATURE REVIEW

2.1. Cash Waqf Linked Sukuk

Cash Waqf Linked Sukuk (CWLS) is an innovative product that combines Islamic commercial financial and Islamic social financial products. It is a form of Islamic bond or sukuk linked to cash waqf. The CWLS enables donors (waqifs) to invest money in a safe and productive investment instrument on either a temporary basis or a permanent basis. The collected waqf fund is invested in sovereign sukuk issued by the Indonesian Ministry of Finance and can be used to finance public expenditure in the education and health sectors (Fauziah et al., 2021).

The CWLS allows the private sector to actively contribute to the development of public infrastructure facilities by the government. This concept unveils a unique mechanism through which waqif contributes funds that are then invested in sovereign sukuk. The returns from this investment are then used to fund various social initiatives and facilities (Cahyono & Hidayat, 2022). The CWLS scheme involves various parties in its implementation, including The Indonesian Waqf Board, Bank Indonesia, the Ministry of Finance, Islamic Banks, the Zakat Institutions, the Waqf Management (*nadzir*), Ministry of Religious Affairs, individual investors, and beneficiaries (*mauquf alaih*) (Bank Indonesia, 2021). The government has demonstrated its commitment to support social investment and productive Waqf development in Indonesia by launching the CWLS.

According to existing literature, the CWLS significantly contributes to the development of public facilities in Indonesia in the following ways. First, the CWLS allows the private sector to actively contribute to the development of public facilities. It gives individuals and organizations an opportunity to invest their money in a way that benefits wider public and economy (Cahyono & Hidayat, 2022). Second, the funds raised by issuing the CWLS are used for the enhancement and provision of public facilities and social programs. The CWLS model comprises the accumulation of waqf funds from waqf donors by Nazhir, which is then used to purchase Sovereign Sukuk from the Ministry of Finance, and the proceed is used to finance government projects, such as infrastructure, education and health facilities, and clean energy projects. Third, the CWLS model promotes a more equitable distribution of wealth and resources. The returns on investment from sovereign sukuk, where waqf funds are invested, are utilized for public benefit, improving overall socioeconomic conditions (Fauziah et al., 2021).

The return of the CWLS series SWR 001 was used for the construction of the Achmad Wardi Eye Hospital as the retina and glaucoma center. This hospital was built by utilizing the IDR 50,849,000,000 CWLS investment provided through private placement. Additionally, the construction of this hospital involved financing instruments from BNI Syariah with a guarantee from the CWLS coupon (Bank Indonesia, 2021). The returns from CWLS investments are used as payment sources for installments and to cover the operational costs of the hospital (Wati et al., 2022). The hospital also uses investment income to offer various free eye surgeries for the needy, to purchase ambulances, and to build additional inpatient rooms. These return distributions contribute to extending their services and improving the quality of eye care provided to poor communities (Wati et al., 2022).

Even though impact is an important element in promoting CWLS investment, very few studies on the impact of CWLS are found in the literature. Several researchers have conducted studies on the impact of CWLS returns based mainly on literature reviews and qualitative methods. Fauziah et al. (2021) state that CWLS can have a social impact by empowering small enterprises by providing them with funding, facilitating economic activity, and promoting sustainable development. Financing using CWLS returns can provide the necessary capital for businesses to expand, innovate, and create jobs, thereby stimulating economic growth and reducing poverty. Other studies discuss the potential impact of CWLS for financing export-oriented Micro, Small, and Medium Enterprises (Siswantoro, 2022), contributing to infrastructure development projects, helping natural disaster

recovery (Faiza, 2019) and also for ensuring food security in Indonesia (Yunita, 2020). However, most of these studies are conceptual and do not provide empirical evidence on the impact of CWLS.

Due to the limited availability of studies on the impact of CWLS, we evaluate the literature on productive cash waqf to examine the possible impact of CWLS empowerment programs. Scholars recommend cash waqfs in poverty alleviation programs for several reasons. First, a cash waqf offers flexibility and accessibility. A cash waqf requires a small amount of money, which allows a larger group of people to participate, thus expanding the donor base and increasing the funds available for poverty alleviation. It also encourages public participation and decreases dependency on government funding for poverty alleviation programs (Hasan et al., 2019). Second, it enhances the sustainability of poverty alleviation programmes. As the principle of waqf preserves the original funds and only uses profits for charitable work, cash waqf has the potential to provide sustainable, lasting benefits for poverty alleviation. Finally, it encourages empowerment through the creation of employment and educational opportunities, which can provide tools for the poor to lift themselves out of poverty.

Several studies have argued the significance of using cash waqf for productivity in socioeconomic development and poverty alleviation (Budiman, 2014; Seprillina et al., 2020). A cash waqf could contribute to increasing welfare because it can be channeled to projects that provide employment for the poor. For example, the Grand Puteri Hotel in Terengganu Malaysia built on cash waqf funds has created many employment opportunities, and stimulated the development of the tourism industry in the area (Saifuddin et al., 2014). In addition, cash waqf can be invested in supporting small businesses or micro-enterprises, providing a sustainable source of income for the poor. It can also be channeled into the agricultural sector to purchase farming equipment and machinery, thereby empowering poor farmers (Saiti et al., 2019). Sayyed et al. (2014) note the role of cash waqf in poverty reduction in Iran through training and education that can empower individuals with the skills needed to secure employment or start their own businesses, leading to increased self-sufficiency.

In addition, the cash waqf program increases financial inclusion by providing access to microfinance and enhancing financial literacy and capabilities. By alleviating poverty, more individuals may participate in the economic system, subsequently enhancing financial inclusion. The involvement of Islamic banking and microfinance entities in the CWLS can also create financial inclusion, ensuring that SMEs have access to financial services (Fauziah et al., 2021). Educating the poor about cash waqf and asking them to open savings accounts in formal financial institutions empower individuals to navigate the financial system more effectively and take advantage of available opportunities. In addition, cash waqf can be utilized to enhance human resources in terms of educational facilities and human capital development, thus making more people financially capable and included (Haneef et al. 2015). Beneficiaries' financial management and literacy abilities may be improved through the processes and obligations related to obtaining and repaying financial assistance.

Cash waqf management has been noted for its role in fostering active civil societies bonded by cooperation against individualism and facilitating dynamic

social change, particularly in Muslim societies (Aliyu, 2018). Cash waqf management actively promotes programs that enhance religiosity within Muslim communities. Funds from cash waqf can be used to build, maintain, or enhance infrastructure such as mosques, madrasas (religious schools), and Islamic centers. These institutions are vital in promoting religious practices, learning, and community bonding. In addition, *nadzir* also uses cash waqf to support community religious activities and events, encourage participation, and bolster individual spiritual life (Sapuan et al., 2017). *Nadzir* also promotes religious education and spirituality along with empowerment programs. This program allows communities to deepen their understanding of religious teachings and practices, thereby enhancing their religiosity (Mohamad Suhaimi et al., 2014).

From these studies, we argue that the use of CWLS for economic and empowerment programs will have significant impacts on increasing the welfare, financial inclusion, social participation, and spirituality of the beneficiaries that eventually contribute to poverty alleviation.

2.2. Impact Evaluation

Impact evaluation is a systematic and rigorous assessment of the outcomes and implications of a certain intervention, program, or policy (Khandker et al., 2009). It seeks to ascertain whether the intervention is successful in achieving its stated goals and objectives, and to comprehend the fundamental factors that contribute to or impede that achievement. Its main purpose is to establish whether and to what extent the observed changes can be attributed to the program under study rather than to other factors. Impact evaluation helps policymakers and other stakeholders understand the effectiveness of their interventions and guide decisions regarding scaling up, modifying, or discontinuing them (Baker, 2000).

The methods and techniques used in impact evaluation include experimental and quasi-experimental designs that aim to control for factors that might otherwise confound the results (Khandker et al., 2009). A key challenge in impact evaluation is establishing a counterfactual scenario that represents what would have happened to the participants if the intervention has not taken place. This allows for a comparison between the outcomes of those affected by the program (the treatment group) and those who are not (the control group) to isolate the impact attributable to the intervention.

The setting of the program or policy being reviewed, the research questions being posed, data availability, ethical issues, and available resources influence the choice of impact evaluation methodologies (White, 2010). Each approach has its advantages and disadvantages. Randomized controlled trials (RCTs) are the rigorous standard for assessing the impact and work best when randomization of the intervention is both ethically and practically possible (Pomeranz, 2017). They offer solid evidence of causal linkages, but can be costly and may not be morally or practically appropriate. Quasi-experimental techniques provide substitutes for RCTs when they are not practical, and can nonetheless yield compelling proof of causality. Some of the methods that are often implemented by researchers include: (1) Propensity Score Matching, which is useful when the study has a large observational dataset and is able to create a statistical comparison group

that matches the treatment group on observed characteristics; (2) difference-in-difference, which is appropriate when researchers can collect data on both treatment and comparison groups before and after the intervention. (3) Regression Discontinuity Design: This is applicable when program eligibility is determined by a cutoff score, enabling comparisons just below and above the threshold. Another method used by researchers is the instrumental variable (IV) approach. It is adopted when there is an external factor (the instrument) influencing participation in the intervention that does not directly affect the outcome. However, this method is complex and requires a strong instrument. Mixed methods are also often implemented by combining quantitative and qualitative data to provide a more comprehensive understanding of the impact of an intervention, explaining not just whether it works but also how and why.

Impact evaluation entails several challenges that can complicate the process and affect the validity and reliability of the results. The fundamental challenge is to isolate the effect of the intervention from other factors that can influence the outcome, thereby ensuring that any observed changes can be attributed to the intervention itself. In addition, the problem of selection bias occurs when participants self-select into programs, or when program implementers select participants non-randomly, the results may not accurately reflect the program's impact due to pre-existing differences between participants and non-participants (Heckman et al., 1998). Other events or changes (confounding variables) occurring simultaneously with the intervention may confound the impact evaluation, making it difficult to ascertain whether the outcomes are due to the intervention or to these external factors (White, 2010).

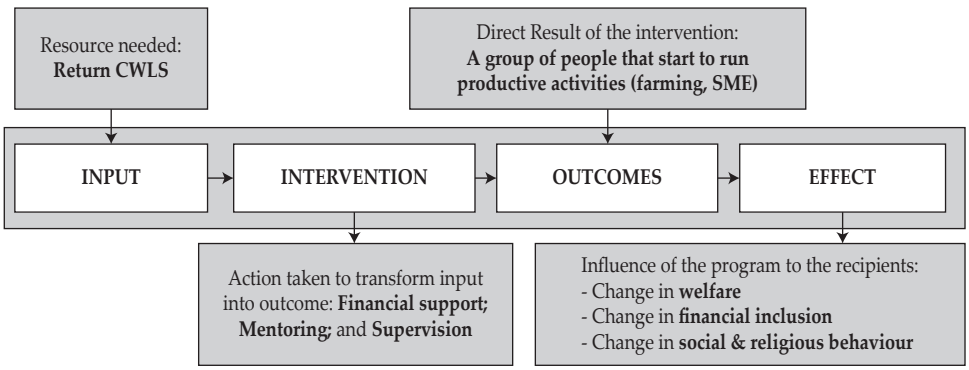
In addition, the problem of misleading effects often occurs due to the drop in earnings before joining the program; this is called Ashenfelter's Dip (Heckman & Smith, 1999). Ashenfelter Dip refers to a phenomenon observed by Orley Ashenfelter in studies on the impact of training programs on labor market outcomes. It describes a pattern in which workers' earnings temporarily decline just before they begin a training programme. This decline may occur because individuals who choose to enroll in such programs are often those who have recently experienced a negative income shock, such as job loss or reduced wages, and are therefore more likely to seek training to improve their future employment prospects. The Ashenfelter Dip is important when evaluating social programs because it can lead to an upward bias in the estimated effects of the program, if not properly accounted for. That is, if participants' earnings are already on a downward trend before the start of the program, the natural rebound in earnings as they regain employment or improve their positions could be incorrectly attributed to the effectiveness of the program. This has significant implications for program evaluators as it indicates the importance of using more sophisticated statistical methods to control for this endogeneity problem.

To minimize these challenges, this study implements difference-in-differences techniques, as suggested by Abadie (2005). Difference-in-differences is a quasi-experimental statistical technique that compares the changes in outcomes over time between a treatment group and a control group. The key insight behind DiD is that even though the treatment and control groups may differ in levels of the outcome variable, they often follow parallel trends over time, meaning that in

the absence of treatment, their outcomes would have changed at the same rate. The effect of treatment is the difference in the outcome changes (or differences) observed between the treatment and control groups over time.

The difference-in-differences method is suitable for controlling Ashenfelter's Dip for several reasons (Heckman & Smith, 1999). DiD takes advantage of both the treatment and control groups. It is assumed that both groups would have experienced a decline in outcomes before the program begins, if neither has received the treatment. Therefore, by observing both groups over time, the DiD can control for unobserved factors that do not change over time. DiD examines the changes in outcomes over time. This is crucial because Ashenfelter's dip is a phenomenon related to the trend or change in outcomes, and not the level itself. By analyzing how the changes differ between the treatment and control groups before and after the program, DiD can isolate the effect of the program from the pre-existing downward trend.

The process of impact evaluation begins with the selection of inputs followed by the provision of interventions. It is expected that the interventions for the inputs will produce the desired outcomes after a program has been completed within a specific time period.



Source: adapted from Khandker et al. (2009)

Figure 2.
Framework for CWLS Impact Evaluation

In this study, the input is the CWLS return distributed by *nadzir* in an empowerment program. During the empowerment program, *beneficiaries* received microloans, capital grants, and mentorship activities. Participation in the *CWLS* program is expected to result in beneficial outcomes such as greater income, enhanced financial inclusion, and increased social participation. The effects experienced by beneficiaries are compared with those of non-beneficiaries.

III. METHODOLOGY

3.1. Sampling and Data Collection Procedures

CWLS returns have been distributed by *nadzir* to several programs in many areas of Indonesia. The majority of the proceeds have been used for educational programs such as scholarships for underprivileged orphans, infrastructure improvements at Islamic boarding schools, and the purchase of educational facilities. Additionally, *Nadzir* has allotted CWLS returns to health programs for the poor, including free eye care and the purchase of medical equipment, in addition to economic and empowerment programs as well as for religious programs. The allocated returns from SWR001 and SWR002 are worth Rp. 969,578,016.10, intended for 467 recipients. This comprises the following:

Table 1.
CWLS Proceed Distribution Program by Sector

Sector	Number of beneficiaries	Value of CWLS proceeds
Education	308	334,029,649.46
Health	85	196,703,267.00
Economic Empowerment	73	436,129,397.64
Religious activity	1	2,715,702.00
	467	**969,578,016.10**

Source : Ministry of Finance data

Some CWLS return distribution programs take the form of direct support, such as providing incentives and scholarships, whereas others take the form of empowerment programs, such as offering capital assistance and microloans. This study only focuses on evaluating the impact of the CWLS economic empowerment program of CWLS since these programs have specific outcomes with measurable impacts on beneficiaries. We use a short timeframe (2021–2022) for the CWLS evaluation. The reason we need to measure the impact in a short timeframe is for program evaluation. By understanding the short-term impact, we can provide feedback and policy recommendations for programs. CWLS investment (SWR001 and SWR002) is limited; thus, the return of CWLS 001 and 002 has been channeled into only four empowerment programs, as follows:

Cattle Breeding Program Jati Bening Kab. Trenggalek, East Java by BSI Maslahat
This program is managed by BSI Maslahat as *nadzir* of the CWLS. The program has distributed Rp. 147,045,925 for the purchase of 20 calves. The beneficiaries of the programme are poor breeders and livestock workers. The objectives of the programs are to strengthen the security of cattle breeding and enhance the skills and capacity of breeders for business income. It is expected that after joining the program, there will be a positive effect on the total income of the breeders in the next seven months.

Rice Seed Breeding Program in Central Lampung by BSI Maslahat
This program has distributed 200 million Rupiah CWLS returns in the form of capital assistance and training for 30 small farmers, with an average land ownership

of 2500 m2 or for farm workers who do not own land. The aim of this program is to ensure the availability of rice seed stocks to support productivity and increase the incomes of small farmers. This program is expected to increase the welfare of its members, financial inclusion, and participation in zakat, infaq, and shadaqah payments through Syariah banking.

Farm for Qurban Cattle in Bima East Nusa Tenggara by Wakaf Al Azhar
This program has distributed 75 million Rupiah from CWLS returns in the form of 20 calves to breeders who face financial hardships due to loan sharks. This program aims to provide capital to the breeders since they have no access to formal financial institutions. This program is expected to have an economic effect by increasing farmers' income, a social effect in the form of education of their children, and a socio-religious effect in the form of increased discipline in performing worships.

BMM Sahabat UMKM by Baitul Maal Muamalat
This program has distributed Rp. 12,253,700 in the form of financing for six MSMEs in South Tangerang. The target recipients are MSME owners who have no access to financing from formal financing institutions. The aim of the program is to provide capital assistance to increase sales and training to improve digital marketing skills. This program is expected not only to have an economic effect in the form of increasing the welfare of MSMEs, but also a social effect in the form of increasing the solidarity of the MSME group to work together in utilizing digital marketing.

The CWLS return distribution for empowerment projects has several characteristics. First, CWLS returns should be distributed in the form of microloans utilizing low-interest profit-sharing or qard hassan schemes. Second, it targets the underprivileged community in the agriculture and livestock industries, who lack funds and have limited access to regulated banking institutions. Third, the programme's long-term objective is to improve the welfare and income of the underprivileged.

The beneficiaries of the four CWLS empowerment programs are 73 poor farmers, poor breeders, and owners of micro enterprises. This study includes all beneficiaries as survey respondents. To evaluate the effect of distributing CWLS returns, primary data have been collected via questionnaire for two groups of respondents: the treatment and control groups. The treatment group includes beneficiaries of the program, known as *mauquf alaih (MA)*. The control group, which is a group of people who live in the same area as beneficiaries, works in the same sector but does not join the CWLS programs. The effect of the economic empowerment programs are compared between the two groups of respondents. This study selects all participants of the CWLS empowerment program, including 73 *mauquf alaih* (MA) and 77 non-*mauquf alaih (non-MA)*, so the total number of respondents is 150. To minimize selection bias for non-MAs, we use filtering questions, including the sector, income level, education, and type of financing from financial institutions. We exclude those who have received financing from any other social or financial institution to eliminate confounding effects.

The data were collected by visiting the program sites directly, where direct interviews with respondents were conducted to ensure proper responses from them. Data were collected from July to August 2022.

3.2. Operational Variables

The distribution of CWLS returns to the economic empowerment programs is expected to have a positive effect on beneficiaries' welfare, financial inclusion, and social and religious engagement. Three types of outcome variables are utilized to quantify the CWLS impacts: welfare, financial inclusion, and social and spiritual enhancement.

The first impact variable is welfar. Welfare refers having resources to meet basic necessities, obtain security and self-respect, and live a fulfilling life by an individual (Gautam & Andersen, 2016). This study employs the concept of welfare proposed by Gautam & Andersen (2016), who build a welfare model for rural livelihoods through rigorous qualitative modeling. According to this concept, the major components of a welfare model are consumption spending, homeownership, and wealth. This model is appropriate for this study because the respondents reside in rural areas and the majority work in the agricultural industry; thus, they share the same characteristics as the respondents in Gautam & Andersen's sample (2016). The welfare component is displayed in Table 2.

Table 2.
Welfare Index Component

Component	Sub-component (weight)	Indicators (weight)	References
Consumption Expenditure	Food expenditure	Average monthly food expenditure per capita	Osberg, L., & Sharpe, A. (2002).
	Non-food expenditure	Average monthly per capita non-food expenditure	Osberg, L., & Sharpe, A. (2002).
Housing	Status	House ownership	Osberg, L., & Sharpe, A. (2002).
	Flooring	Main floor in the house using ceramics	Osberg, L., & Sharpe, A. (2002).
	Sanitation	Household-specific access to toilet	Osberg, L., & Sharpe, A. (2002).
Wealth	Assets	Number of cars	Gautam & Andersen (2016)
		Number of motorcycles	Gautam & Andersen (2016)

The second impact variable is financial inclusion. Financial inclusion is defined as access to an adequate range of safe, convenient, and affordable financial services for disadvantaged groups and other vulnerable groups, including low-income, rural, and undocumented people who are underserved or excluded from the formal financial sector (Dar & Ahmed, 2021). Based on this definition, financial inclusion

can be measured using measures of increased access to products and services through formal financial institutions such as savings, insurance, and credit, as well as the increased use of formal financial institution services for various needs. The measurement of the financial inclusion components is presented in Table 3.

Table 3.
Components of the Financial Inclusion Index

Component	Sub-component	Indicators	References
Access to use financial products and services	Saving	Ownership of saving	Dar & Ahmed (2021)
	Insurance	Ownership of insurance	Dar & Ahmed (2021)
Use of financial product	Transaction in bank branches	Ownership and frequency of transaction in bank branches per month	Dar & Ahmed (2021)
	ATM	Ownership and frequency of transaction in ATM per month	Dar & Ahmed (2021)
	Internet/mobile banking	Ownership and frequency of transaction using internet/mobile banking per month	Dar & Ahmed (2021)
Access to credit	Ownership of credit from formal/semi formal financial institution	Numbers of credit from formal/semi formal financial institution	Dar & Ahmed (2021)

The third impact variable is social participation and the spiritual index. As discussed in the previous section, the empowerment program provided by *Nadzir* incorporates religious education and encourages community participation; therefore, we believe that the CWLS empowerment program will have a significant impact on beneficiaries'social participation and spirituality. To measure this effect, several components used in this study relate to community service participation and acts of carrying out spiritual obligations. The components of social and spiritual indices are presented in Table 4.

Table 4.
Component of Social and Spiritual Index

Component	Sub-component	Indicators	References
Community participation	Community services/ activities	Participation in community activities	Fauziah et al., (2021)
Muslim mandatory obligation (compulsory)	Performing five times prayer in a day, fasting in Ramadhan and zakat fitrah	Participation in community activities	Beik & Arsyianti (2015)
Sunnah worship	Performing sunnah worshipsuch as, praying in the mosque, reciting Al-Quran, paying ZIS	Frequency of performing sunnah worship	Beik & Arsyianti (2015)

The index measurement in this study is based on the following:

$$Index\ A_i = \frac{A_i - A_{min}}{A_{max} - A_{min}} \quad (1)$$

A_i is the actual value of the subcomponent indicator, A_{min} is the minimum value, and A_{max} is the maximum value of each indicator. Furthermore, the sub-components are added with the same weight (arithmatic average):

$$C_i = \frac{\sum_{i=1}^{n} Index\ A_{i_i}}{n} \quad (2)$$

where C represents each index component. Finally, the composite index score is calculated using the following:

$$Index_i = \frac{\sum_{i=1}^{3} C_{i_i}}{n} \quad (3)$$

The indices are the welfare index (WI), the financial inclusion index (FII), and the Social and Spiritual Index (SSI), with scores ranging from 0 to 1.

3.3. Method of Data Analysis

The Difference-in-Differences (DiD) method is used to examine the effect of the CWLS program on welfare, financial inclusion, and social and religious impact in the treatment and control groups in two time periods. The Difference-in-differences (DID) is a statistical technique used in econometric and quantitative research in the social sciences that attempts to mimic experimental research designs using observational research data by studying the effect of differential treatment in a 'treatment group' versus a 'control group' utilizing longitudinal data from the treatment and control groups by calculating the effect of the treatment (Abadie, A. 2005). The main assumption in the DiD model is the assumption of parallel trends, which require that, in the absence of treatment, the difference between the 'treatment' and 'control' groups is constant over time. In the panel dataset, DID amounts to the following (Abadie, A., 2005):

$$\mathrm{DID} = \mathrm{E}[\mathrm{Y}_{t_1}^{\mathrm{T}} - \mathrm{Y}_{t_0}^{\mathrm{T}} \,|\mathrm{X}_{t_0}, T_{t_1} = 1] - \mathrm{E}[\mathrm{Y}_{t_1}^{\mathrm{C}} - \mathrm{Y}_{t_0}^{\mathrm{C}} \,|\mathrm{X}_{t_0}, T_{t_1} = 0] \quad (4)$$

Information:

DID : *difference-in-differences*
$\mathrm{Y}_{t_0}^{\mathrm{C}}$: non-MA index at t_0
$\mathrm{Y}_{t_0}^{\mathrm{T}}$: Index MA in t_0
$\mathrm{Y}_{t_1}^{\mathrm{C}}$: Index of non-MA at t_1
$\mathrm{Y}_{t_1}^{\mathrm{T}}$: Index MA in t_1
T : Dummy variable dummy, T=1 if *mauquf alaih* and T=0 if not *mauquf alaih*

We also include control variables in the model. These include age, education, household size, and the working sector.

IV. RESULTS AND ANALYSIS

4.1. Descriptive Analysis

In general, the respondents' age range spread evenly from under 35 to over 55 years. The MA group is dominated by respondents aged 46-55 years (30% of the total MA). Based on age, it can be seen that this distribution program does not only target productive age respondents, but also those over 55 years of age. Based on the level of education, the majority of respondents are high school graduates and equivalent; however, there are also a large number of respondents who have an education level below SMA for both MA and non-MA. Based on the number of family members, the majority of respondents have 3-5 family members and work in the agricultural and plantation sectors. Based on the descriptive statistics, it can be concluded that both MAs and non-MAs have similar characteristics related to the business sector, age, education level, and number of family members; thus, we can compare the impact of distributing CWLS returns to recipient and non-recipient groups.

Table 5.
Descriptive Statistics of the Respondents

Variable	Description	MA (Beneficiaries)	Non MA-(non beneficiaries)
Age	< =35	27.4%	25.98%
	36-45	19.18%	27.27%
	46-55	30.14%	25.97%
	>55	23.29%	20.78%
Education	Elementary School	21.92%	25.97%
	Junior high school	19.18%	33.77%
	Senior high school	47.95%	36.36%
	Diploma or higher	10.96%	3.9%
Family Size	<=2	36.99%	41.56%
	3 – 5	58.90%	57.14%
	>5	4.11%	1.30%
Business sector	Agriculture	91.78%	92.21%
	Production	6.85%	5.19%
	Retail	1.37%	2.6%
Survey Location	Bima	24.66%	23.38%
	Lampung	39.73%	42.86%
	Trenggalek	27.4%	25.97%
	Tanggerang	8.22%	7.79%

4.2. Impact on Welfare

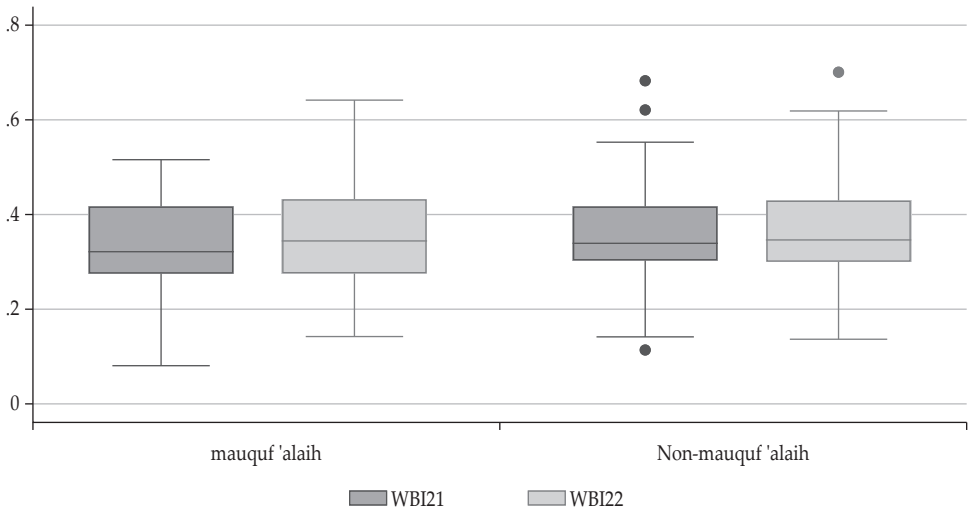
The study constructs a welfare index for both the treatment and control groups in two periods to determine the effect of intervention.

Table 6.
Welfare Index

Mauquf alaih (MA) – beneficiaries/treatment group				
Variable	**Obs**	**Mean**	**Std. Deviation**	**Growth**
Welfare Index 2021	73	0.332482	0.097376	
Welfare Index 2022	73	0.353345	0.104473	6.3%
Non *Mauquf alaih* (non-MA) – non beneficiaries/ control group				
Welfare Index 2021	77	0.358196	0.105182	
Welfare Index 2022	77	0.366965	0.105719	2.34%
All respondents				
Welfare Index 2021	150	0.345682	0.101938	
Welfare Index 2022	150	0.360336	0.104984	4.24%

The Welfare Index (WI) describes the level of welfare of respondents as measured by three components: consumption expenditure, home ownership, and ownership of other assets. The WI measurement results for the total sample show an average value of 34.57% in 2021, which then increase to 36.03% in 2022. The maximum WI value is one, indicating that the WI value of the respondents in this study is still low. This shows that the respondents belong to the category of poor people with a low level of welfare. The results of the Welfare Index (WI) measurement show that for MA, there is an increase in WI from 0.3325 in 2021 to 0.3533 in 2022, or an increase of 6.3%. Meanwhile, the results of WI measurements for non-MAs show an increase from 0.3581 in 2021 to 0.3669 in 2022, an increase of 2.34%. These results indicate that beneficiaries experienced a higher increase in welfare than non-beneficiaries did.

Further evaluation is performed using the boxplot presented in Figure 3. In general, MAs have a lower welfare level compared to non-MA before joining the program in 2021. The Figure also shows the distribution of MAs has shifted up from 2021 to 2022 towards the third quantile. This shows that a greater proportion of MAs experienced increased welfare compared to before joining the program, while the distribution of WI among non-MAs does not show a significant change.



Sources: data analysis

Figure 3.
Box Plot Welfare Index

The difference-in-difference statistical method is employed to evaluate whether this increase in welfare is due to the intervention provided by the CWLS economic empowerment program. The results of the DiD modeling show that before joining the program, the treated group (MA) has a significantly lower WI value than the control group (non-MA). These results indicate that *nadzir* has channeled CWLS returns to the right targets, namely groups of people who have the lowest level of welfare in the community, such as farm laborers, livestock workers, and micro- and small-business actors who do not have access to formal financial institutions.

After the intervention program, both the treatment (MA) and control (non-MA) groups experience an increase in welfare; however, the welfare between the two groups is not significantly different. The results of the DiD test show that the MA group is able to improve its welfare at a higher rate than the non-MA group, but the difference is not statistically significant.

Based on the results of DiD, the level of welfare of MAs is not different from that of non-MAs. This result needs to be interpreted carefully because the CWLS return distribution program has only been given for one year, so the effect may have yet materialized. However, this study also shows that although the initial conditions of MAs have a lower level of welfare compared to non-MAs, MAs are able to increase their welfare with the intervention provided in the form of capital assistance and a series of training provided by *nadzir*. The DiD model also shows several significant variables explaining the welfare index, including the size of the household and working sector.

Table 7.
Difference in Difference of Welfare Index

Variable(s)	Coeff.	Std. Err.	T	P>t
Age	0.005	0.002	2.126	0.034
Age2	0.000	0.000	-1.633	0.104
Education	0.018	0.012	1.488	0.138
Household size	-0.027	0.004	-6.868	0.000
Work_sector	-0.109	0.021	-5.171	0.000

Outcome var.	WBI	S. Err.	t	P>t
Before				
Control	0.39			
Treated	0.364			
Diff (T-C)	-0.026	0.015	-1.71	0.089*
After				
Control	0.397			
Treated	0.383			
Diff (T-C)	-0.014	0.015	0.89	0.374
Diff-in-Diff	0.012	0.021	0.58	0.56

R-square: 0.23

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

4.3. Impact on Financial Inclusion

One of the expected impacts of the program is increased financial inclusion. To measure this effect, we develop a Financial Inclusion Index (FII). The FII measurement results are listed in Table 8.

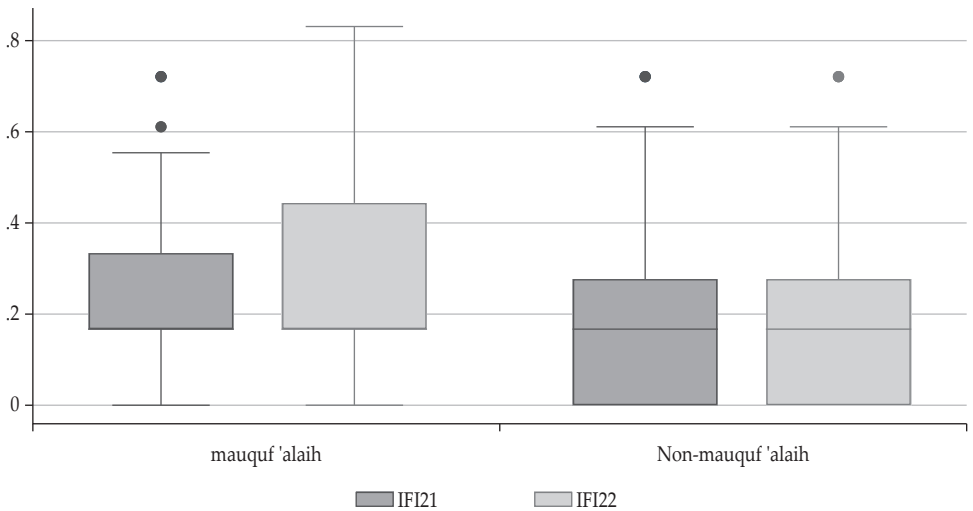
Table 8.
Financial Inclusion Index (FII)

Mauquf alaih (MA) – beneficiaries/treatment group				
Variable	**Obs**	**Mean**	**Std. Deviation**	**Growth**
FII 2021	73	0.23575	0.18268	
FII 2022	73	0.29808	0.24626	26.44%
Non *Mauquf alaih* (non-MA) – non beneficiaries/ control group				
FII 2021	77	0.16653	0.19627	
FII 2022	77	0.17584	0.20807	5.59%
All respondents				
FII 2021	150	0.2002	0.1923	
FII 2022	150	0.2353	0.2348	17.5%

The survey results showed that the FII values of MA and non-MA are still low, at 20% in 2021 and 23.53% in 2022. These values indicate that the respondents in this study are those who have not used a variety of formal financial products to meet their financial needs. After participating in the program, the FII MA score

increased significantly by 26.44%, from 0.2358 in 2021 to 0.2981 in 2022. The FII score for non-MA also increased 5.59% from 0.1665 in 2021 to 0.1758 in 2022.

The reason behind a significant increase in FII scores for MA is, being previously ignorant of formal financial institution, they have been introduced to banking services by *nadzir*. For example, for the rice seed breeding program in Lampung, BSMU require MA to open an account and conduct financial transactions using their account. Furthermore, for the BMM Sahabat UMKM program, MA is trained to carry out digital marketing and accept payments using e-money, such as OVO, Gopay, and QRIS. This introduction would directly increase the financial inclusion of beneficiaries of the CWLS program. The distribution of the increase in the FII values for MA and non-MA in the two time periods can be seen using the box plot in Figure 4.



Source: data analysis

Figure 4.
Box Plot FII

The box plot of FII shows that the median of the quantile for MA is higher than that for non-MA, and the median increases significantly after receiving the CWLS program. Meanwhile, for non-MA, there is no change in the median value in the two observation periods because non-MA have not gained new knowledge about financial literacy or encouragement from external parties to utilize banking services. To evaluate the effect of distributing CWLS benefits on FII in two time periods, the difference-in-difference statistical method is implemented and its results are presented in Table 9.

Tabel 9.
Difference in Difference of Financial Inclusion Index

Variable(s)	Coeff.	Std. Err.	T	P>t
Age	-0.003	0.005	-0.643	0.521
Age2	0.000	0.000	0.045	0.964
Education	0.114	0.024	4.85	0.000
Household size	0.009	0.007	1.151	0.251
Work_sector	-0.249	0.04	-6.224	0.000

Outcome var.	IFI	S. Err.	t	P>t
Before				
Control	0.455			
Treated	0.502			
Diff (T-C)	0.047	0.029	1.6	0.11
After				
Control	0.468			
Treated	0.567			
Diff (T-C)	0.1	0.029	3.42	0.001***
Diff-in-Diff	0.053	0.041	1.3	0.194

R-square: 0.35

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

The DiD results show that before the intervention program, the FII value of the treated group (MA) is higher than that of the non-MA group (non-MA). However, this difference is not statistically significant. After the intervention, the FII value in the MA group (MA) increases significantly. Compared to non-MA, the FII MA value is significantly different at the 1% significance level. The results of this test show that the program managed by *nadzir* directly provides access for MA to formal financial institutions for savings, lending, and other access.

However, the DiD results for the two time periods before and after the intervention for the two sample groups (control and treated) show no significant differences in FII values. This is because the post intervention period is still very short. The DiD results also show that the FII score is significant related to the level of education and business sector. MA who have a higher level of education have a high FII score, and MA who work in the agricultural sector tend to have a lower FII score compared to those in other sectors.

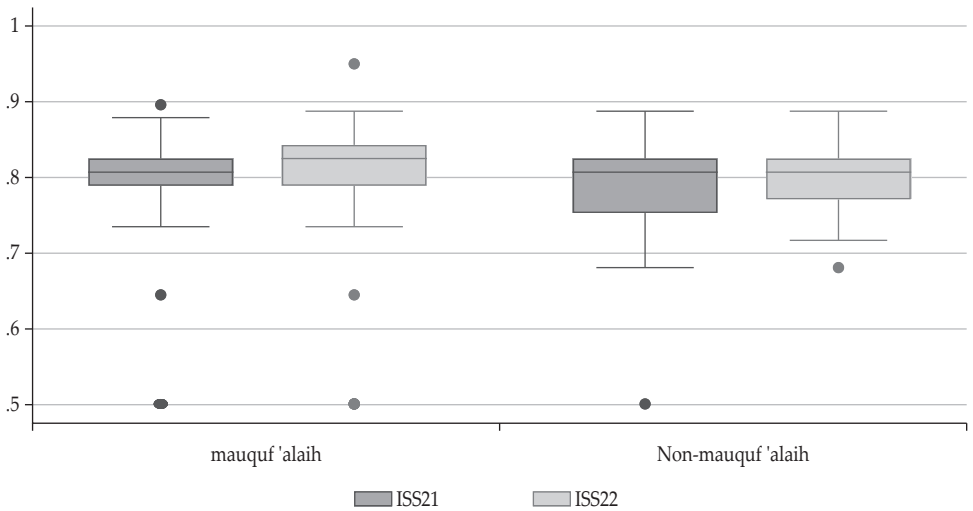
4.4. Impact on Social and Spiritual Dimensions

The distribution of CWLS returns is also expected to have social and spiritual effects on beneficiaries. This study uses the Social and Spiritual Index (SSI) to measure social and spiritual effects, as shown in Table 10.

Table 10.
Social and Spiritual Index (SSI)

Mauquf alaih (MA) – beneficiaries/treatment group				
Variable	**Obs**	**Mean**	**Std. Deviation**	**Growth**
SSI 2021	73	0.7907	0.0879	
SSI 2022	73	0.7982	0.0839	0.9%
Non *Mauquf alaih* (non-MA) – non beneficiaries/ control group				
SSI 2021	77	0.7917	0.0554	
SSI 2022	77	0.7907	0.0424	0.7%
All respondents				
SSI 2021	150	0.7913	0.0728	
SSI 2022	150	0.7967	0.0657	0.8%

SSI is measured using three components: participation in social activities, such as social gatherings, religious activities, and the frequency of performing obligatory and *sunnah* worship. The average SSI index measurement results are 79.13% in 2021, increasing slightly to 79.76% in 2022. The SSI measurement results show that the SSI values for MA and non-MA remain roughly the same during the two observation periods. We argue that social and religious behavior cannot be changed in a short period of time. In addition, a high SSI score of 80% on average indicates that both MA and non-MA are active in social activities and have carried out their religious obligations well. An overview of the distribution of SSI values is also shown in the Box Plot in Figure 5.



Source : Data analysis

Figure 5.
Box Plot of Social and Spiritual Index

The distribution of SSI scores for MA and non-MA in 2021 and 2022 shows no significant difference, and is relatively constant. However, in general, the MA SSI value is higher than the non-MA SSI value, meaning that *nadzir* has targeted beneficiaries with higher social participation and spirituality. To evaluate further, the DiD method is used to measure whether the SSI value between MA and non-MA is different in the two time periods:

Table 11.
Difference in Difference Social Spiritual Index (SSI)

Variable(s)	Coeff.	Std. Err.	t	P>t
age	0.006	0.002	3.11	0.002
age2	0	0	-3.124	0.002
Education	0.013	0.009	1.474	0.142
Household size	0	0.003	-0.043	0.966
work_sector	-0.036	0.015	-2.328	0.021

Outcome var.	SSI	S. Err.	t	P>t
Before				
Control	0.699			
Treated	0.696			
Diff (T-C)	-0.003	0.011	-0.27	0.788
After				
Control	0.704			
Treated	0.703			
Diff (T-C)	-0.001	0.011	0.1	0.924
Diff-in-Diff	0.002	0.016	0.12	0.901

R-square: 0.08

* Means and Standard Errors are estimated by linear regression

**Inference: *** p<0.01; ** p<0.05; * p<0.1

Prior to the implementation of the program, the SSI values of MA and non-MA groups are roughly the same and do not differ significantly. One year after joining the program, The SSI values of the participants and non-participants in the program ado not differ significantly from each other. Both MA and non-MA are community groups that have actively participated in social and religious events and fulfilled their obligations. Age and the company sector are two variables that strongly influence SSI differences, as shown by the DiD results. The SSI value increases with the age of the respondent, and those who work in the agricultural sector have a lower SSI value than those in other sectors.

In summary, the DiD estimation shows that the CWLS empowerment programs are able to enhance welfare and financial inclusion, but are unable to raise spirituality or social involvement. The empowerment program run by *nadzir*, which uses CWLS, provides working capital assistance and is beneficial for raising the welfare of *mauquf alaih*. This initiative has improved the welfare and financial inclusion by providing participants with capital support, along with continuous monitoring, education, and training. These results are consistent with

Sayyed et al. (2014). They show how cash waqf may raise well-being by promoting entrepreneurship and education.

Mauquf alaih, who are poor farmers, landless farmers, impoverished breeders, and owners of microbusinesses, can establish their own businesses with the support of the funding offered. For instance, under the Lampung rice seed program, low-income individuals who were once farm laborers could make an effort to offer high-quality rice seeds sold directly to farmers in the Central Lampung area. In addition, the cow breeder program in Trenggalek and Bima, East Nusa Tenggara, contributes to the welfare of underprivileged farmers by offering training programs for cattle breeding in addition to financial aid for the purchase of calves. *Nadzir* also assists in the sale of goods. This comprehensive empowerment program is useful for improving the welfare of beneficiaries. These findings support the conceptual idea put forward by Saiti et al. (2019), who state that cash waqf can be used by the agricultural sector to purchase farming equipment and machinery, empowering poor farmers and subsequently enhancing the welfare of beneficiaries.

The findings of this study also explain that, after joining the program in a year, there has been a significant increase in financial inclusion for *mauquf alaih*. As noted, *Nadzir* is affiliated with Islamic banking. When running the program, *Nadzir* also required *mauquf alaih* to open an account and carry out all transactions using banking services. This process will directly increase new account ownership for *mauquf alaih*. In addition, during the direct survey in the field, we noticed that *nadzir* encouraged micro businesses in Tangerang to use e-money and online transactions. This programme may contribute to financial inclusion by fostering financial knowledge and literacy. This financing program assists clients in making informed decisions and understanding other pathways to access finance by educating them about interest-free financial options (Oyekolade & Taofiki Ajani, 2019).

These results are in accordance with the research put forward by Fauziah et al. (2021), who state that Islamic banking involvement in the CWLS system can help promote financial inclusion by ensuring that small businesses have access to financial services. By enhancing financial access for the underprivileged and destitute, particularly for those without collateral, means of subsistence, or credit history, the use of CWLS returns in microfinance is essential to achieving financial inclusion. By removing the financial obstacles that traditional loans may have, this funding enables impoverished communities to take advantage of business prospects and enhance their financial well-being. By giving people access to finance without requiring them to pay interest, it has the potential to significantly enhance the lives of poor families (Alotaibi & Hariri, 2020).

However, we also find that the impact of the empowerment program on increasing welfare and financial inclusion is not statistically significant. The impact of the program is insignificant for several reasons. First, the impact evaluation is conducted only one year after the inception of the program. A study by Ebbinghaus et al. (2022) finds that welfare impacts can be evident two years after an intervention. Therefore, it can be concluded that it takes more than one year for intervention and program implementation to produce significant impacts. Second, the amount of CWLS proceeds allocated for empowerment programs is still minimal; therefore, it could not be distributed to large programs that are expected

to have a significant effect on the community. Third, we also find that there was foot and mouth disease that affected livestock, which resulted in a decrease in the farmer's income. Agriculture and livestock may experience risks such as crop failure due to weather, pests, and diseases. This risk can increase the failure of empowerment programmes. Therefore, *nadzir* needs a strategy to mitigate the risks that can occur by transferring them to third parties, such as insurance.

4.5. Robustness Tests

Robustness testing checks for model uncertainty and evaluates whether the estimated outcomes are affected by model parameter changes. Neumayer and Plümper (2017) provide five methods for evaluating the robustness of a model: the model variation test, randomized permutation test, structured permutation test, robustness limit test, and placebo test. In this study, we employed a model variation test to ascertain the stability of the estimation outcome. Neumayer and Plümper (2017) propose substituting an alternative assumption for one or more model definition assumptions in the model variation test. Here, we substitute other regressors for the original set of regressors.

In the estimation models presented in Table 5, 6, and 7, we conduct four estimation models with different sets of covariates. The fourth model in each table is the baseline model with all covariates, including age, household size, education, and employment sector. We reduce the number of covariates in the other estimation models (1,2, and 3). A robust model can be identified from the consistent deviation signs of the coefficients and a significance test of the p-value.

Based on the four estimation models presented in table 4.8, we find similar findings regarding the sign and significance of the coefficients. Thus, our finding regarding the impact of CWLS on welfare is robust.

Table 12.
Robustness Check for Difference in Difference of Welfare Index

Outcome variable	Model (1) Coefficient	Model (2) Coefficient	Model (3) Coefficient	Model (4) Coefficient
WI before				
Control (Non clients)	0.546	0.360	0.226	0.390
Treated (clients)	0.523	0.334	0.197	0.364
Difference	-0.023	-0.026	-0.029*	-0.026*
	(0.015)	(0.016)	(0.016)	(0.015)
WI after				
Control (Non clients)	0.555	0.368	0.233	0.397
Treated (clients)	0.544	0.354	0.216	0.383
Difference	-0.011	-0.014	-0.017	-0.014
	(0.015)	(0.016)	(0.016)	(0.015)
Difference in Difference	0.012	0.012	0.012	0.012
	(0.022)	(0.023)	(0.022)	(0.021)

Table 12.
Robustness Check for Difference in Difference of Welfare Index (Continued)

Outcome variable	Model (1) Coefficient	Model (2) Coefficient	Model (3) Coefficient	Model (4) Coefficient
covariates variables				
Age		0.002	0.007***	0.005**
		(0.003)	(0.003)	(0.002)
Age2		-0.000	-0.000**	0.000
		(0.000)	(0.000)	(0.000)
Education	0.003		0.035***	0.018
	(0.011)		(0.012)	(0.012)
Household size	-0.026***		-0.023***	-0.027***
	(0.004)		(0.004)	(0.004)
Work sector	-0.120***	-0.090***		-0.109***
	(0.021)	(0.021)		(0.021)
No. observations	300	300	300	300
R^2	0.20	0.10	0.15	0.23

Note: Standard errors in parentheses

*: p<0.1; **: p<0.05; ***: p<0.01

Employing a similar procedure, we conduct four estimation models to check the robustness regarding the Financial Inclusion Index. estimation models 1, 2 and 3, as our variation models, provide consistent findings with the baseline model (Model 4). This model check also confirms that our findings on the impact of CWLS on financial inclusion are robust.

Table 13.
Robustness Check for Difference in Difference of Financial Inclusion Index

Outcome variable	Model (1) Coefficient	Model (2) Coefficient	Model (3) Coefficient	Model (4) Coefficient
FII before				
Control (Non clients)	0.296	0.668	0.080	0.455
Treated (clients)	0.335	0.738	0.120	0.502
Difference	0.040	0.069**	0.039	0.047
	(0.029)	(0.030)	(0.031)	(0.029)
FII after				
Control (Non clients)	0.305	0.682	0.092	0.468
Treated (clients)	0.398	0.805	0.184	0.567
Difference	0.093***	0.122***	0.092***	0.100***
	(0.029)	(0.030)	(0.031)	(0.029)
Difference in Difference	0.053	0.053	0.053	0.053
	(0.041)	(0.042)	(0.043)	(0.041)
covariates variables				
Age		-0.005	0.001	-0.003
		(0.005)	(0.005)	(0.005)
Age2		0.000	-0.000	0.000
		(0.000)	(0.000)	(0.000)

Table 13.
Robustness Check for Difference in Difference of Financial Inclusion Index (Continued)

Outcome variable	Model (1) Coefficient	Model (2) Coefficient	Model (3) Coefficient	Model (4) Coefficient
Education	0.145***		0.152***	0.114***
	(0.022)		(0.024)	(0.024)
Household size	0.010		0.017	0.009
	(0.007)		(0.008)	(0.007)
Work sector	-0.235***	-0.310***		-0.249***
	(0.040)	(0.039)		(0.040)
No. observations	300	300	300	300
R^2	0.33	0.29	0.26	0.35

Note: Standard errors in parentheses

*: p<0.1; **: p<0.05; ***: p<0.01

Finally, we use a similar procedure to check the robustness of our estimation model on social and spiritual dimensions. The models 1,2 and 3, as our variation models, show similar findings to the baseline model. This confirms that our findings on the impact of social inclusion on CWLS are robust.

Table 14.
Difference in Difference Social Spiritual Index (SSI) (Robustness Check)

Outcome variable	Model (1) Coefficient	Model (2) Coefficient	Model (3) Coefficient	Model (4) Coefficient
SSI before				
Control (Non clients)	0.822	0.721	0.645	0.699
Treated (clients)	0.819	0.721	0.641	0.696
Difference	-0.003	-0.001	-0.004	-0.003
	(0.011)	(0.011)	(0.011)	(0.011)
SSI after				
Control (Non clients)	0.828	0.727	0.650	0.704
Treated (clients)	0.827	0.728	0.648	0.703
Difference	-0.001	-0.001	-0.002	-0.001
	(0.011)	(0.011)	(0.011)	(0.011)
Difference in Difference	0.002	0.002	0.002	0.002
	(0.016)	(0.016)	(0.016)	(0.016)
covariates variables				
Age		0.005***	0.006***	0.006***
		(0.002)	(0.002)	(0.002)
Age2		-0.000***	-0.000***	-0.000***
		(0.000)	(0.000)	(0.000)
Education	0.011		0.019**	0.013
	(0.008)		(0.009)	(0.009)
Household size	0.001		0.001	-0.000
	(0.003)		(0.003)	(0.003)

Table 14.
Difference in Difference Social Spiritual Index (SSI) (Robustness Check)
(Continued)

Outcome variable	Model (1) Coefficient	Model (2) Coefficient	Model (3) Coefficient	Model (4) Coefficient
Work sector	-0.042*** (0.015)	-0.042*** (0.015)		-0.036** (0.015)
No. observations	300	300	300	300
R^2	0.05	0.08	0.06	0.08

Note: Standard errors in parentheses

*: p<0.1; **: p<0.05; ***: p<0.01

V. CONCLUSION AND RECOMMENDATION

This study evaluates the impact of cash waqf-linked sukuk empowerment programs on the welfare, financial inclusion, social participation, and spirituality of beneficiaries by means of the difference-in-difference method. It finds that the CWLS process involves poor community groups in economic empowerment programs in agriculture, animal husbandry, and MSMEs. The target recipients of assistance (*mauquf alaih*) are groups of people with the lowest level of welfare in an area. The CWLS return distribution program has an effect on increasing the welfare and financial inclusion of *mauquf alaih* but has no effect on increasing social participation and spirituality. This study also finds that the overall impacts of welfare, financial inclusion, social participation, and spirituality are not statistically different between beneficiaries and non-beneficiaries.

This study has limitations, as it only uses a one-year timeframe, and the number of respondents is limited. The main reason why we conduct the study for a short period is for program evaluation, so by understanding the impact and potential drawbacks earlier, regulators and *nadzir* can use this study's findings for program evaluation. Future studies should use longitudinal data to enhance the reliability and validity of the impact studies. Furthermore, we suggest that future studies use a mixed method by adding a qualitative impact study. This qualitative analysis is important for measuring the impact of CWLS return distribution on non-economic aspects such as religion, education, and health.

This study has several policy implications for regulators and for future studies. For regulators, we strongly recommend increasing communication about the impact and benefits of CWLS to potential investors. This study shows that the CWLS plays an important role in increasing welfare and financial inclusion. These impacts need to be clearly articulated to potential investors to enhance their participation in the CWLS program. We also recommend that regulators add an insurance scheme for CWLS return distribution on the empowerment programs on agriculture and sector, since both these sectors are high-risk investments.

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