

## Productive WAQF business models through the integration of Islamic social and commercial finance

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**Abstract:** Poverty is an apparent problem in Indonesia, with the number of people living in poverty reaching 26.36 million. Islamic Social Finance (ISF), especially through productive *waqf* instruments, is one of the prospective solutions to overcome this problem. Although Indonesia has enormous *waqf* potential, *waqf* realisation is still very low. There are several challenges in the *waqf* collection process, namely low literacy or public awareness, unprofessional management, and a lack of qualified human resources (*nazhir*). This research aims to determine the optimal productive *waqf* model to be implemented in Indonesia using the Delphi ANP-BOCR method. To strengthen the research results, this study also conducted a meta-analysis as a form of robustness check and a benefits, opportunities, costs, and risks (BOCR) analysis of each model as supporting arguments. The findings of this study show that Islamic banks as a way to leverage funds for *waqf* are the most prioritised model. This is because Islamic banks act as intermediary institutions that have great potential for optimising the collection and management of *waqf* funds, which can increase economic growth. This is reinforced by the results obtained from the meta-analysis and several supporting arguments, which show that Islamic financial institutions (including Islamic banks) can improve community welfare through the utilisation of social funds (including *waqf*). Besides that, this research also discusses an alternative model of productive *waqf* through digitalisation by adopting several technologies that aim to increase efficiency, transparency, and accessibility so as to optimise the collection and management of *waqf* funds more effectively and efficiently.

**Keywords:** Delphi ANP-BOCR, Islamic finance, Meta-analysis, Productive *waqf*.

### 1. Introduction

Poverty is an apparent problem in developing countries, including Indonesia [1]. Various strategies have been implemented to alleviate the problem, such as job creation, health and education development, community empowerment, and so on [2]. However, handling the problem of poverty is not a simple matter [3], as evidenced by the number of poor people in Indonesia, which reached 26.36 million by September 2022.

This number increased by 0.20 million people from March 2022 [4]. This shows that the poverty alleviation programs implemented by the government are still not optimal. For this reason, an effective solution is needed to overcome this problem.

Islamic Social Finance (ISF) plays a role in alleviating poverty in Indonesia [5]. Policymakers are very interested in ISF because of its significance and potential effects on the economy. ISF can strengthen the poor and needy to improve the welfare of society as a whole [6], close the wealth gap, and enforce justice in society within a framework that complies with *sharia* principles [7].

ISF includes several philanthropic instruments such as *zakat*, *infaq*, *sadaqah*, and *waqf*; partnership instruments such as *qardh hasan*, and modern-based institutions such as microfinance [8], [9].

Among ISF instruments, *waqf* is the best instrument to distribute income in society [10] and contribute to the achievement of the Sustainable Development Goals (SDGs) [11], [12]. *Waqf* also provides benefits for social activities such as education, social programmes, and mosque maintenance [13]. The productive use of *waqf* by commercialising *waqf* assets for social benefits will create greater value for the welfare of the people [14]. Not only for social activities, *waqf* could realise efficiency and equity in economic activities [15], as *waqf* assets can be used to help a country's economic activities, both as a source of development capital and income for the community. Due to its sustainable nature, *waqf* in the productive sector has become one of the most important instruments for fulfilling investment [16]. Productive *waqf* can contribute to providing long-term benefits for society and future generations.

The global cash *waqf* collection potential can reach around USD 1 trillion, and land *waqf* assets can reach more than USD 3 trillion [17]. In the case of Indonesia, the *waqf*'s potential collection is around IDR 180 trillion per year [18].

Despite the potential, several problems in *waqf* collection, such as the lack of literacy or public awareness, unprofessional management, a lack of qualified human resources (*nazhir*), etc. [19], have implications for the low *waqf* collection in Indonesia, which only amounted to IDR 255 billion in 2011-2018 [20]. This means that there is still a considerable gap between the potential and the realisation of *waqf* collection.

To close the gap between the potential and the realisation of *waqf* collection and improve the national economy, it is necessary to integrate social and commercial finance to support the development of the productive *waqf* sector. Experts such as Musari (2022), Zauro, et al. (2020), and Widodo (2018, 2019) have pointed out the need to integrate Islamic social and commercial finance as it is very important to achieve greater development impact [21], effectively alleviate poverty [25], and realise the economic independence of the *ummah* [26].

This research aims to enhance prior studies by recommending the most optimal model of the integration of Islamic social and commercial finance that can be incorporated in the practise of productive *waqf* in Indonesia.

The results of this study indicate that the most optimal productive *waqf* model is Islamic banks as a way to leverage funds for *waqf* because Islamic banks have an important role in performing social functions, managing stable and sustainable sources of funds, and optimising transparency, accountability, and good governance in *waqf* management, which can increase economic growth.

This is reinforced by the results of the meta-analysis, which show that Islamic financial institutions (including Islamic banks) can improve people's welfare through the utilisation of *waqf* funds (including *waqf*), as well as some supporting arguments from the BOCR analysis. Besides that, this research also discusses alternative models of productive *waqf* through digitalisation by adopting several technologies that aim to increase efficiency, transparency, and accessibility so as to optimise the collection and management of *waqf* funds effectively and efficiently.

The next section of the paper is organised as follows: the second section discusses the relevant theory. The third section discusses the analysis method.

The results and discussions are presented in the fourth section, and finally, the fifth section contains conclusions, recommendations, and policy implications.

## 2. Literature Review

### 2.1. *Waqf as a Form of Integration of Islamic Social and Commercial Finance*

*Waqf* is a permanent donation of personal property or other goods made by donors, either individuals or institutions. The word *waqf* comes from the word *habasa*, which means to keep, maintain, and stop [27]. In the Islamic perspective, *waqf* means to hold something and optimise its benefits in the

way of Allah. Islam specifically introduced *waqf* as a type of divine donation for the benefit of the *ummah*. The *Quran* and *Hadith* emphasise the importance of *waqf* [28] in Surah *Al-Hasyr*, verse 7, as follows:

بَيْنَ الْأَغْنِيَاءِ مِنْكُمْ ...

Meaning: "... so that wealth does not circulate only among the rich among you." (QS 59:7)

From an economic point of view, *waqf* is a form of savings-investment mechanism where the funds are invested in profitable assets to generate income. The income from the *waqf* investment can be redistributed to finance various social projects such as the construction of hospitals, orphanages, universities, and other institutions, or in other words, it can realise potential economic projects and philanthropic goals [29], [30].

*Waqf* is used as a means for commercial activities as well. For instance, the corporate *waqf* in the Kingdom of Saudi Arabia, which was established to enable donors to create investment *waqf* based on modern managerial concepts [31]. Thus, *waqf* can be used as a tool for poverty alleviation in society [32]. Syarifuddin [15] explains that productive *waqf* has characteristics that can be distinguished from other ISF instruments.

Productive *waqf* can transfer private ownership into shared ownership in perpetuity and provide sustainable benefits. Productive *waqf* can strengthen the economy and social community, improve welfare, reduce unemployment and poverty [33]. To optimise the benefits of *waqf*, it should be professionally managed to advance the productive business sector. Thus, *waqf* assets can be developed and utilised optimally [34].

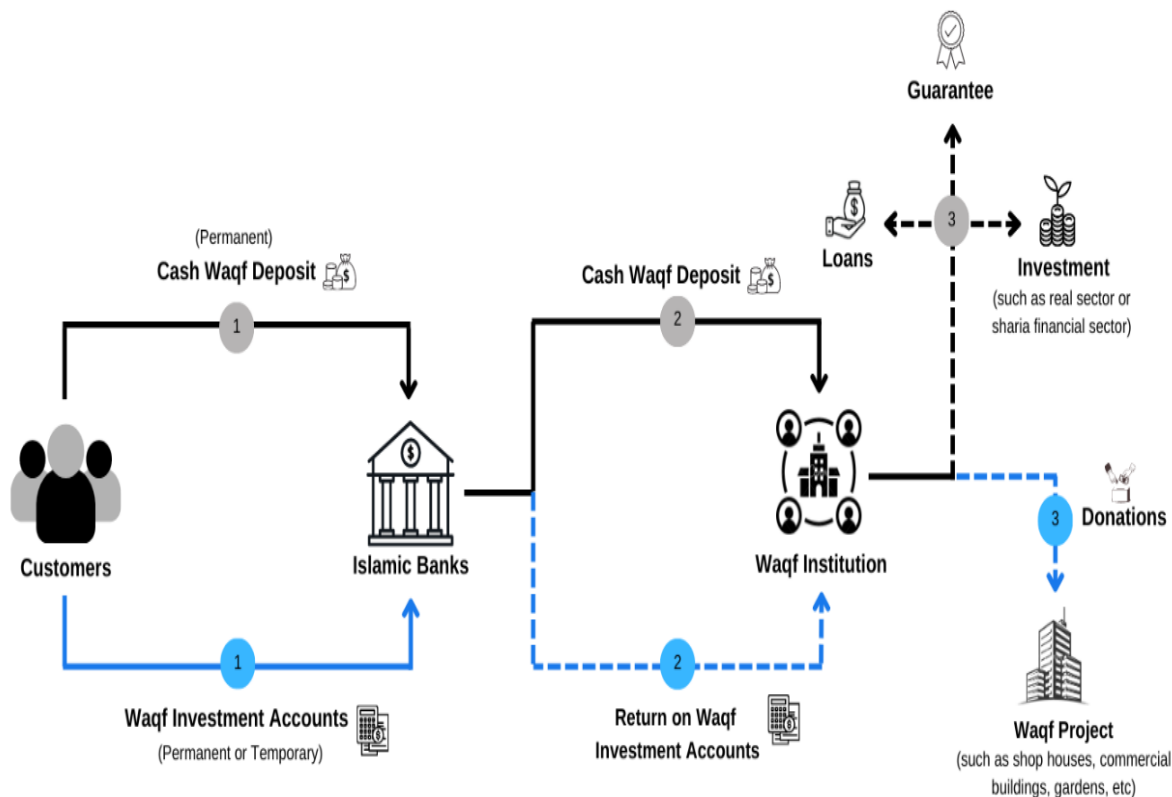
## 2.2. Integration Model of Islamic Social and Commercial Finance

Islamic social and commercial finance can be integrated in several ways. Tahiri Jouti [9] constructs four forms of Islamic social and commercial financial integration: 1) Islamic banks as a way to leverage funds for *waqf*; 2) Islamic banks financing *waqf* projects; 3) sukuk issuances for *waqf* project financing; and 4) *zakat* and *waqf* institutions as guarantors.

This study also analyses other models published by IsDB [35], such as the 5) APIF model and by Mohd Thas Thaker [36], namely the 6) cash *waqf* microenterprise investment model.

### 2.2.1. Islamic Banks as a Way to Leverage Funds for Waqf

Islamic banks as a way to leverage funds for *waqf*, use two methods in their implementation: 1) Cash *waqf* deposit is a method in which *waqif* donate some money transferred to the *waqf* institutions' bank account that can be used for investments, loans, or collateral. (2) A *Waqf* investment account is a proposed financial portfolio scheme offered by Islamic banks or financial institutions. It allows individuals or organisations to contribute funds to the *waqf*, and those funds are then pooled together with contributions from other investors. If the *waqf* investment account generates a profit, then (with or without a specified period of time), it is distributed to the *waqf* institution, which can be used for specific purposes. The customer can choose the term of the investment account and get back his capital, or they can make the investment account a *waqf*. *Waqf* institutions can create different types of investment accounts for specific projects [9], as described in Figure 1.



**Figure 1.**

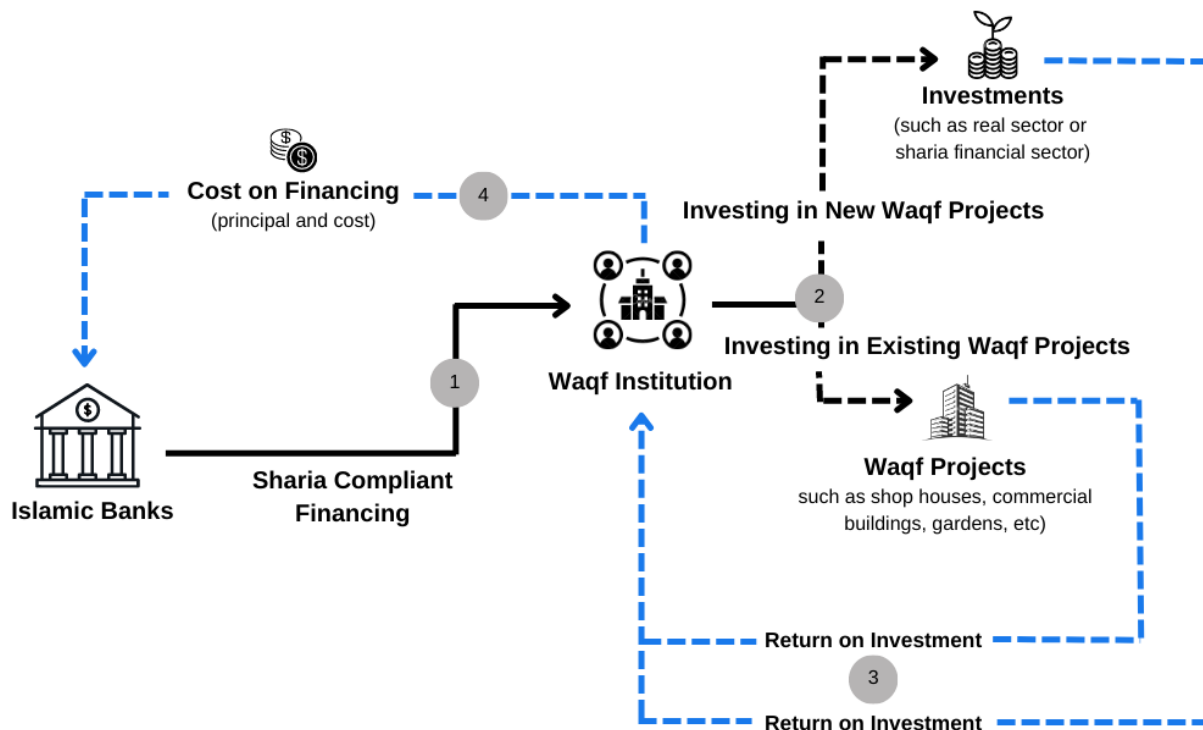
Scheme of Islamic banks as a way to leverage funds for *waqf*.

Source: Modified from Tahiri Jouti [9].

As illustrated in Figure 1 above: 1) Customers open a cash *waqf* deposit and/or *waqf* investment account at Islamic banks. 2) The cash *waqf* deposit and/or investment fund are handed over to the *waqf* institution. 3) The *waqf* institution uses the cash *waqf* deposit for loans, investments (in the real sector, such as direct investments in productive companies or business units, or in the Islamic financial sector, such as *mudharabah* deposits and Islamic mutual funds), or guarantees, while the returns from the *waqf* investment account are used for *waqf* project donations (such as the construction of shophouses, commercial buildings, gardens, etc.).

### 2.2.2. Islamic Banks Financing Waqf Projects

In this model, Islamic banks finance *waqf* projects through *waqf* institutions. The *waqf* projects are expected to generate financial returns by optimising *sharia*-compliant contracts. The principal of the financing is paid back to the bank, and the investment profit is given to the *waqf* institution [9], as described in Figure 2.



**Figure 2.**

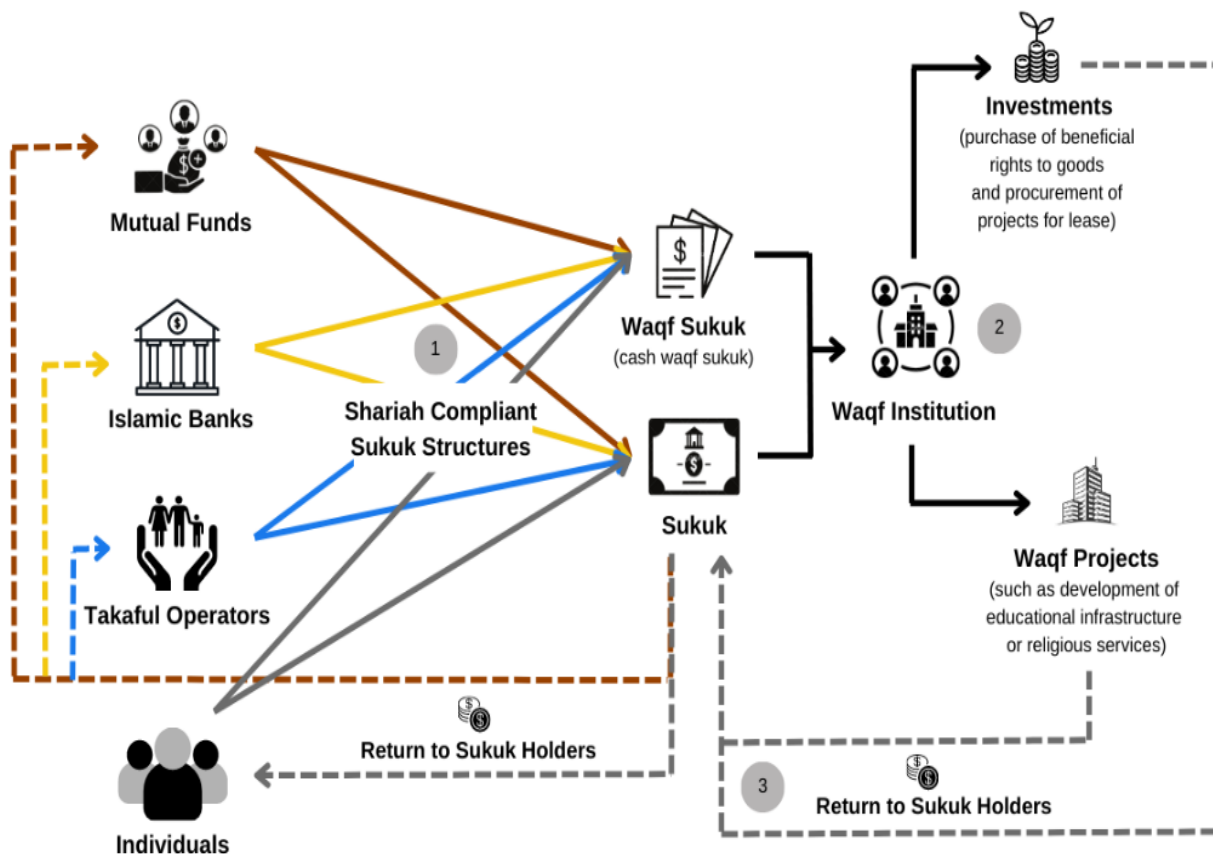
Scheme of Islamic banks financing *waqf* projects.

Source: Modified from Tahiri Jouti [9].

As illustrated in Figure 2 above: 1. Islamic banks provide financing options that comply with *sharia* principles to *waqf* institutions; 2. The *waqf* institution distributes the collected funds for new or ongoing *waqf* projects. In this case, it can be invested (in the real sector, such as direct investment in productive companies or business units, and/or in the Islamic financial sector, such as *mudharabah* deposits and Islamic mutual funds) and/or channelled into *waqf* projects (such as the construction of shophouses, commercial buildings, gardens, etc.); 3. The *waqf* institution receives the return on investment; and 4. The *waqf* institution returns the principal financing funds to the Islamic bank.

### 2.2.3. Sukuk Issuances for Waqf Project Financing

In this model, *waqf* institutions issue *waqf sukuk* to finance *waqf* projects. The *sukuk* holders receive a portion of the returns from the *waqf* project, while the *sukuk* is donated as *waqf*. The *waqf* institution receives the investment returns as payment [9], as described in Figure 3.

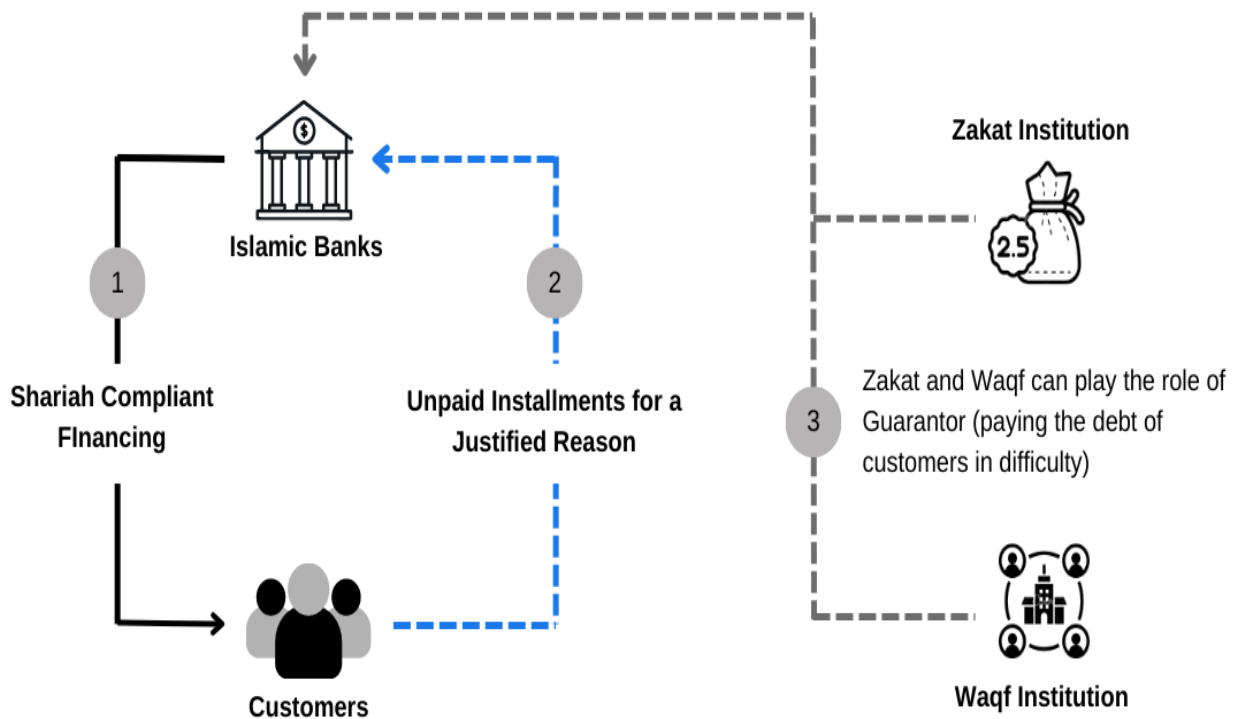


**Figure 3.**  
Scheme of sukuk issuances for *waqf* project financing models.  
Source: Modified from Tahiri Jouti [9].

As illustrated in Figure 3 above: 1. A *waqf* institution may issue either or both types of *sukuk* based on a *sharia*-compliant structure, namely *sukuk* or *sukuk waqf* (cash *waqf sukuk* type); 2. The *waqf* institution invests in *waqf* projects (such as the development of educational infrastructure or religious services) or other ventures (such as the purchase of beneficial rights to goods or the procurement of projects for lease); 3. The *sukuk* holders receive a return on their investment.

#### 2.2.4. Zakat And Waqf Institutions as Guarantors

Another form of Islamic social and commercial finance integration is the model of *zakat* and *waqf* institutions as guarantors. One of the eight categories of beneficiaries of *zakat* funds are indebted people who have difficulty paying their debts. Through this method, if they fulfil certain criteria, *zakat* institutions can pay the debts of Islamic bank customers. *Zakat* institutions can encourage Islamic financial institutions to provide financing to unbanked and underserved categories of society [9], as described in Figure 4.

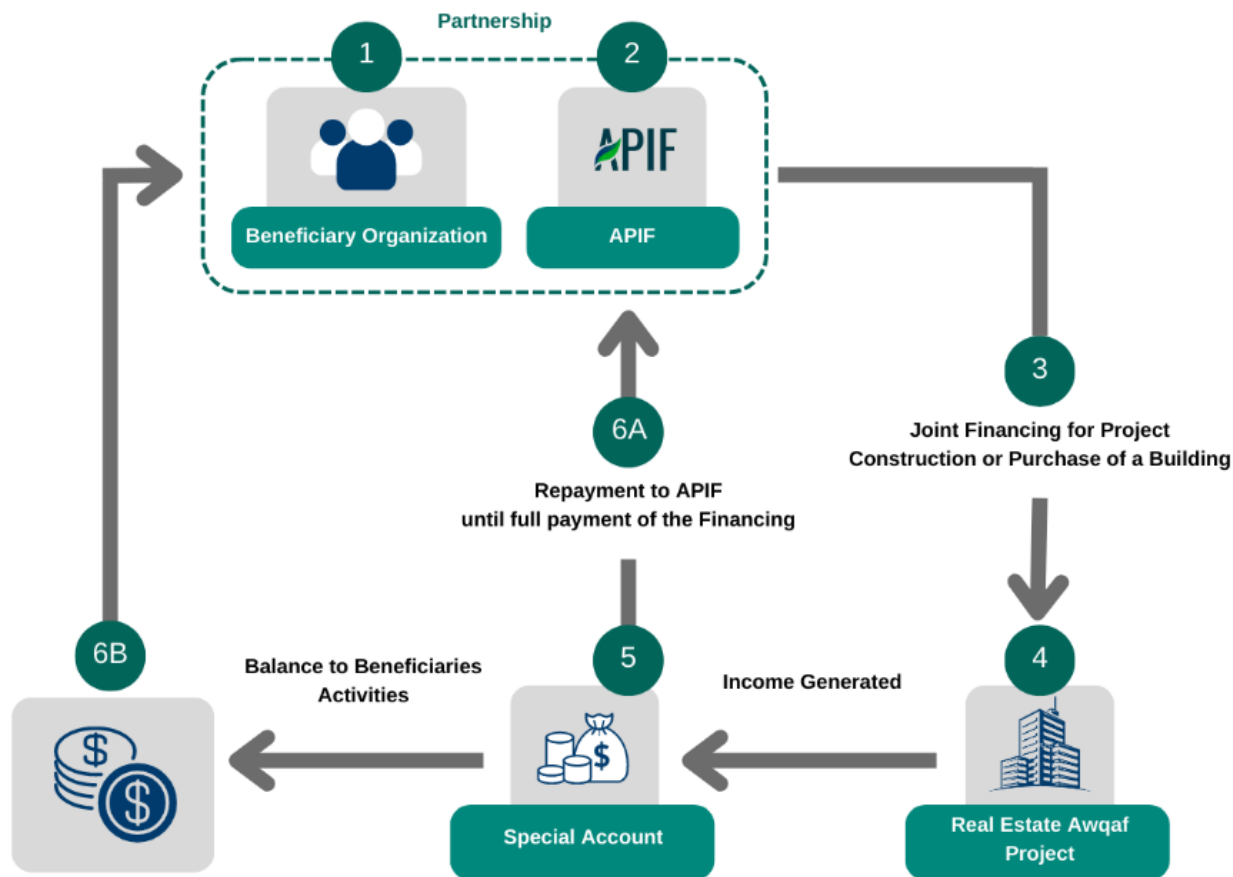


**Figure 4.**  
Scheme of *zakat* and *waqf* institutions as guarantor models.  
**Source:** Modified from Tahiri Jouti [9].

As illustrated in Figure 4 above: 1. Islamic banks provide adequate financing for customers in accordance with *sharia* principles; 2. Islamic banks identify unpaid instalments with justifiable reasons; and 3. Guarantors can include *zakat* and *waqf* funds so that unpaid customer installments can be covered by these funds.

#### 2.2.5. *Awqaf Properties Investment Fund (APIF)*

The Awqaf Properties Investment Fund (APIF) model supports the creation of entirely new charitable *waqf* or finances the development of *waqf* land to assist organisations engaged in development activities. This is done in order to achieve financial sustainability. APIF finances the construction, renovation, and/or purchase of income-generating assets from real estate with a financial contribution from the beneficiaries of at least 25% of the total project cost or a corresponding plot of land (in the case of greenfield projects). Repayment of APIF financing comes from the proceeds of the project itself, with sufficient funds remaining to support the beneficiary's operations during the repayment period. The entire revenue is utilised to continue the beneficiary's operations once the funds are repaid [35]. The APIF model can be seen in Figure 5.



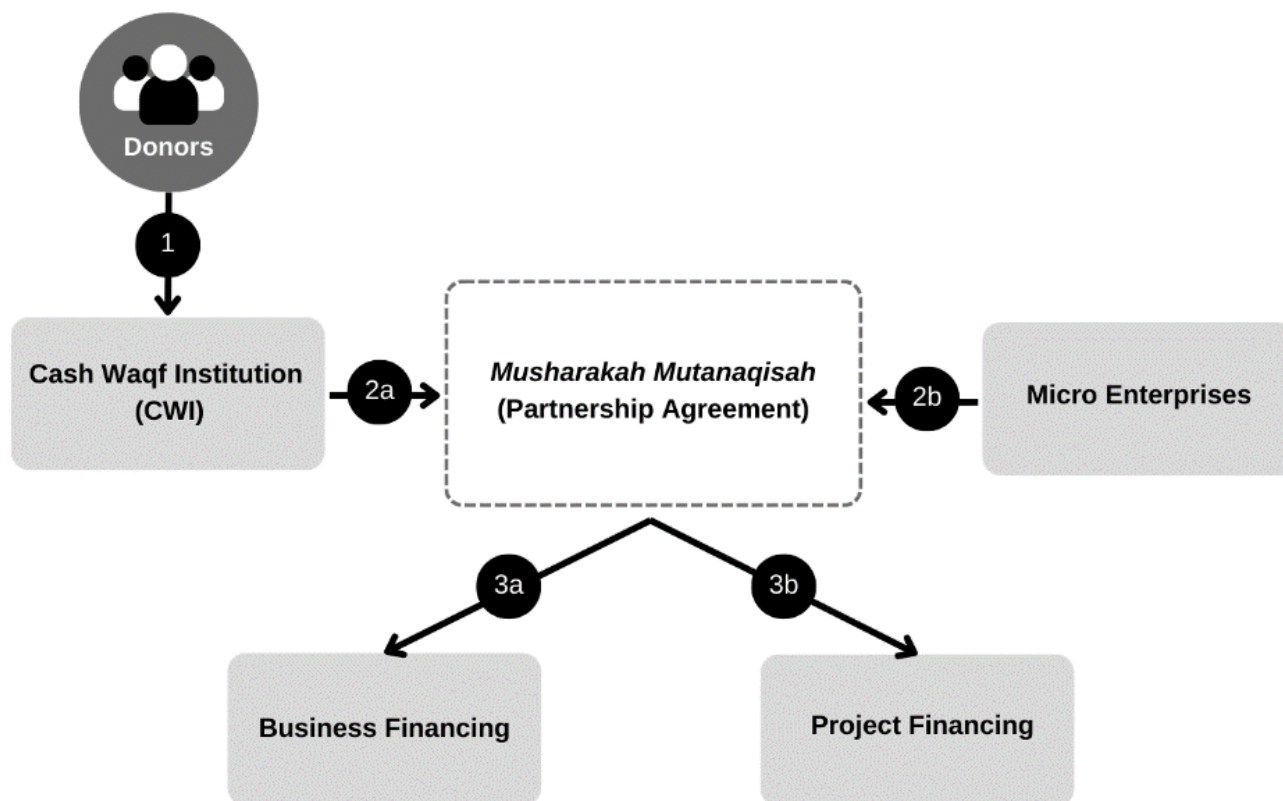
**Figure 5.**  
Scheme of Awqaf Properties Investment Fund (APIF) models.  
**Source:** Modified from IsDB [35].

As illustrated in Figure 5 above: 1. A beneficiary organisation submits a formal application to APIF; 2. APIF will consider applications from member or non-member countries, after taking into account the conditions of emphasis on legal due diligence and initial compliance (KYC); 3. APIF will co-finance the construction of the project or the purchase of the building; 4. The real estate *waqf* project generates income; 5. The income generated from the real estate *waqf* project is used for repayment to APIF until the repayment of the financing instalments is met (6a) and the remainder is distributed to the beneficiaries (6b).

#### 2.2.6. Cash *Waqf* Microenterprise Investment

The cash *waqf* microenterprise investment model can be explained as follows: donors from both the public and private sectors give cash *waqf* to Cash *Waqf* Institutions (CWI) to establish permanent *waqf*. Through *musyarakah mutanaqisah* (diminishing partnership) contracts with micro-entrepreneurs, CWI provides financial services. This approach does not impose interest or collateral requirements on CWI. CWI are expected to thoroughly examine any microenterprises that may be relevant to their business [36], as described in Figure 6.





**Figure 6.**  
Scheme of cash *waqf* microenterprise investment models.  
Source: Modified from Mohd Thas Thaker [36].

As illustrated in Figure 6 above, it can be explained as follows: 1) Donors (either from the public or corporate sector) give cash *waqf* to CWI for the purpose of establishing a permanent *waqf*; 2) CWI (2a) will offer financial services by entering into *musyarakah mutanaqisah* (diminishing partnership) contracts with micro-entrepreneurs (2b). Both CWI and micro-entrepreneurs will jointly engage in business activities or purchase commercial properties or enterprises; 3) The scheme is suitable for both business financing (3a) and project financing (3b). Business financing includes the financing of machinery, land, electrical installations, equipment, and other fixed assets. While project financing includes the financing of shophouses and business premises.

### 3. Research Methodology

#### 3.1. Data

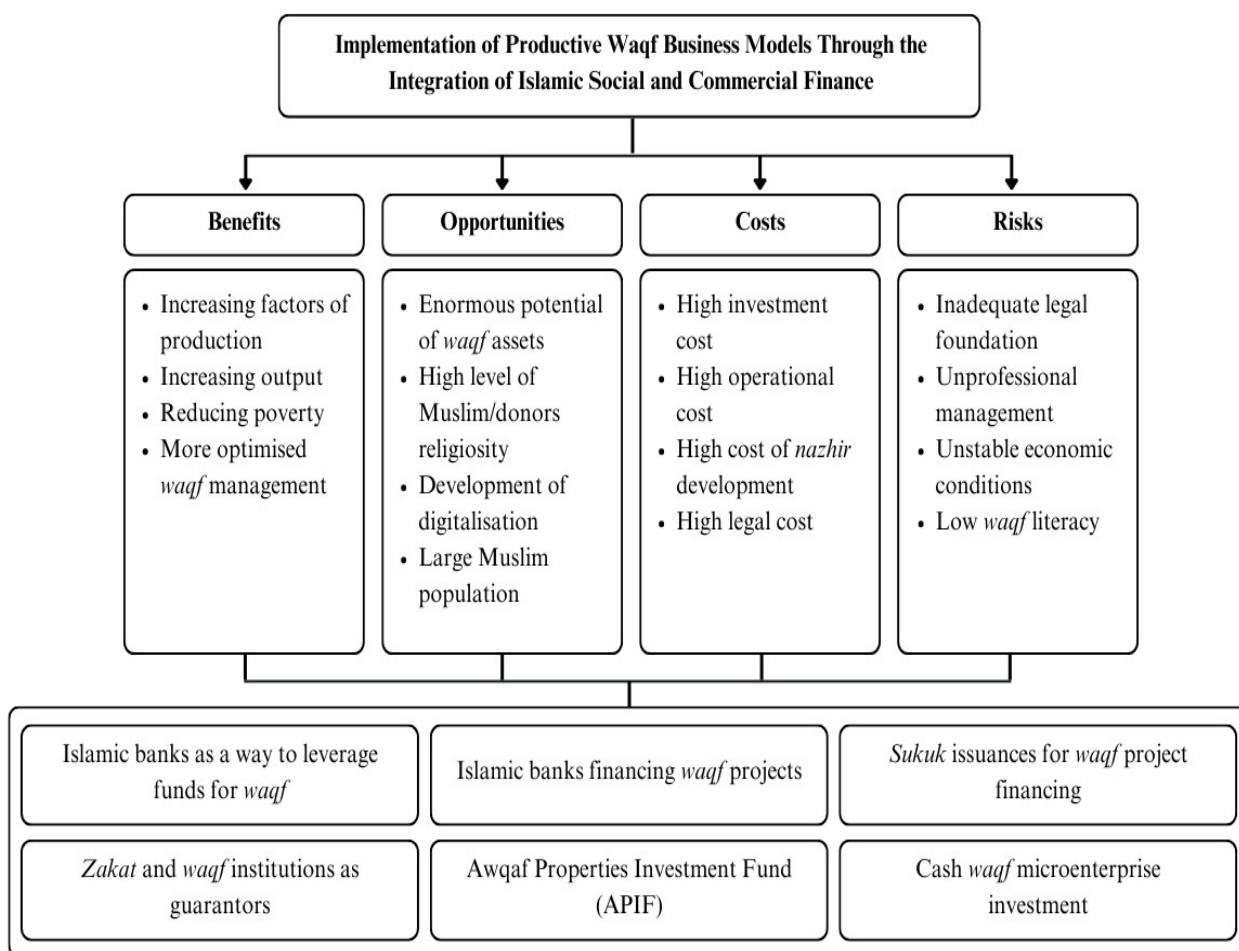
This research uses three different data sources for three types of methods. First, for the Delphi ANP-BOCR method, data was obtained through opinions collected from experts (academics) in several regions, namely the Special Region of Yogyakarta (DIY), East Java, North Sumatra, West Sumatra, and South Sulawesi, by conducting in-depth interviews. Secondly, to strengthen the research results, this study also conducted a meta-analysis using research data obtained from Google Scholar. Lastly, this study also includes a BOCR analysis to assess the influence of each model based on previous related literature.

### 3.2. Methods

#### 3.2.1. Delphi ANP-BOCR

In order to produce the most optimally productive *waqf* model in this study, the Delphi ANP-BOCR method was used. The Delphi procedure is a structured communication technique that relies on a panel of experts to solve complex problems [37]. The ANP (Analytic Network Process) is a mathematical theory that examines effects by using assumption-based techniques for problem solving [38]. The BOCR model was chosen due to its ability to assess the positive (benefits and opportunities) and negative (costs and risks) aspects of an activity (in this case, alternative productive *waqf* models), which is supported by various literature [39].

There are three stages to this method. In the first stage, the ANP analysis framework was developed through literature studies related to credible research topics. Secondly, the questionnaires that were distributed to respondents (experts) were quantified. Thirdly, the analysis was conducted to produce an answer to the research objective, which is to obtain the most optimally productive *waqf* business model. Data processing in this study used Super Decision 2.10 software, Microsoft Excel, and SPSS. The following is the ANP research framework, which can be seen in Figure 7.



**Figure 7.**  
ANP-BOCR model.

Referring to Saaty (2006) there are three formulas for determining the alternative to be selected, namely the standard formula, multiplicative formula, and additive formula. Formula (2) can only be applied if it is believed that relative measurements have the same magnitude or can be said to be equivalent, so that it will not produce negative values. Formula (2) produces minimum benefits, so the results are considered short-term. Meanwhile, in formula (3) b, o, c, and r represent the priority ranking of alternatives so that the final result can be negative and is considered long-term.

Standard formula:

$$\frac{B}{C} \quad (1)$$

Multiplicative formula:

$$\frac{B \times O}{C \times R} \quad (2)$$

Additive formula:

$$bB + oO - cC - rR \quad (3)$$

To obtain accurate results, a robustness test in the form of a sensitivity analysis is generally conducted on the results obtained. In this study, sensitivity analysis will not be conducted because the Delphi procedure in the ANP analysis framework is already robust enough, according to experts [41].

### 3.2.2. Meta-Analysis

To strengthen the results of the study, a meta-analysis was also conducted as a form of validation of the results. Meta-analysis is a statistical method that integrates several findings from individual studies [42]. Meta-analysis aims to identify the facts of strong relationships from various literatures more accurately, although there may be bias in certain studies [43]. This can drive decision-making, both at the organisational and societal levels, as it is based on facts [44], [45].

Data collection in this method is conducted through Google Scholar because it is connected to various journal websites and indexing agencies. The reason why this study used Google Scholar was to collect a large enough amount of data to minimise bias. As for data processing, this method uses JASP software as an analysis tool.

The type of meta-analysis in this study is a correlation meta-analysis that shows the relationship between two variables by utilising the results of previous correlation studies. The process consists of several stages, first, transforming the  $r$  (Pearson's correlation) value in each study into an effect size using a predetermined formula. Then, testing for heterogeneity and calculating the summary effect. If there is no heterogeneity, the summary effect will be calculated using a Fixed Effect Model (FEM), but if there is heterogeneity, the summary effect will be calculated using a Random Effect Model (REM). Finally, an evaluation of publication bias was conducted.

In this research, the scale proposed by Bhandari (2023) was utilised to interpret the effect size obtained from correlational studies. The classification of effect sizes is as follows:

**Table 1.**  
Effect size classification.

Effect size	Pearson's r
Weak	0.1 to 0.3 or -0.1 to -0.3
Moderate	0.3 to 0.5 or -0.3 to -0.5
Strong	0.5 or greater or -0.5 or less

Source: Bhandari [46].

In the Pearson's  $r$  correlation coefficient, values close to -1 or 1 indicate a large effect size, while values close to 0 indicate a small effect size. The positive and negative signs in  $r$  Pearson indicate the direction of the relationship between variables. A positive sign means that both variables increase or decrease simultaneously. Meanwhile, a negative sign means that one variable decreases while the other variable increases, and vice versa.

### 3.2.3. BOCR Analysis

To support the implementation of productive waqf models in Indonesia, the author also provides his own insights through the assessment of each model based on the suitability of the sub-criteria contained in the BOCR aspect. These views are based on arguments obtained from previous related literature. The relevance of each argument determines the size of the assessment given. The assessment is intended to measure the contribution or influence of each model. The form of assessment can be seen in Table 2 below.

**Table 2.**  
BOCR assessment analysis.

	<b>Benefit</b>	<b>Opportunity</b>	<b>Cost</b>	<b>Risk</b>
Yes	+1	+1	-1	-1
Quasi yes	+0.75	+0.75	-0.75	-0.75
Depend	+0.5	+0.5	-0.5	-0.5
Quasi no	+0.25	+0.25	-0.25	-0.25
No	0	0	0	0

The scoring ranges from -1 to +1. Positive values are assigned to statements that support the benefits and opportunities values, while negative values are assigned to statements that belong to the costs and risks aspects. A score of +1 or -1 indicates that the statements obtained from the related literature strongly support the BOCR aspects. Conversely, a value of 0 indicates that there is no support for the BOCR aspect.

If the characteristics of the alternative productive *waqf* model have absolute attributes that do not depend on other characteristics, in other words, strengthen the BOCR aspects, then the alternative model will obtain the "Yes" attribute. The "Quasi Yes" attribute will be obtained if the characteristics of the alternative model support the BOCR aspect but still have deficiencies in other aspects. The "Depend" attribute will be obtained if the characteristics of the alternative productive *waqf* model support aspects of BOCR but are highly dependent on other aspects.

The "Quasi No" attribute will be given if the characteristics of the alternative productive *waqf* model do not really support the BOCR aspect in question but still have little impact on it. The "No" attribute will be given if the characteristics of the alternative productive *waqf* model do not support the BOCR aspect in question.

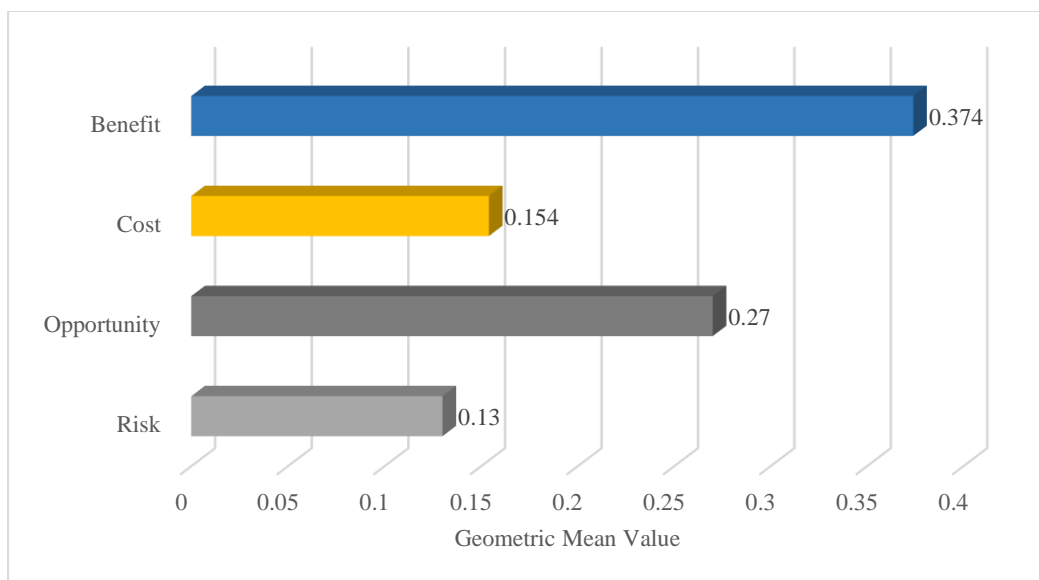
## 4. Results and Discussion

### 4.1. Delphi ANP-BOCR Analysis

#### 4.1.1. Priority of BOCR criteria

In this section, there are four aspects to be considered in implementing the productive *waqf* model in Indonesia, namely in terms of benefits, opportunities, costs, and risks (BOCR). As illustrated in Figure 8, the benefit criterion has the highest geometric mean value, which means that it is prioritised in the implementation of the productive *waqf* model.

As explained by Medias [47], productive *waqf* is currently an ISF instrument that continues to be developed because it has considerable benefits in encouraging social and religious activities in the community.



**Figure 8.**  
Geometric mean value of each BOCR criteria.

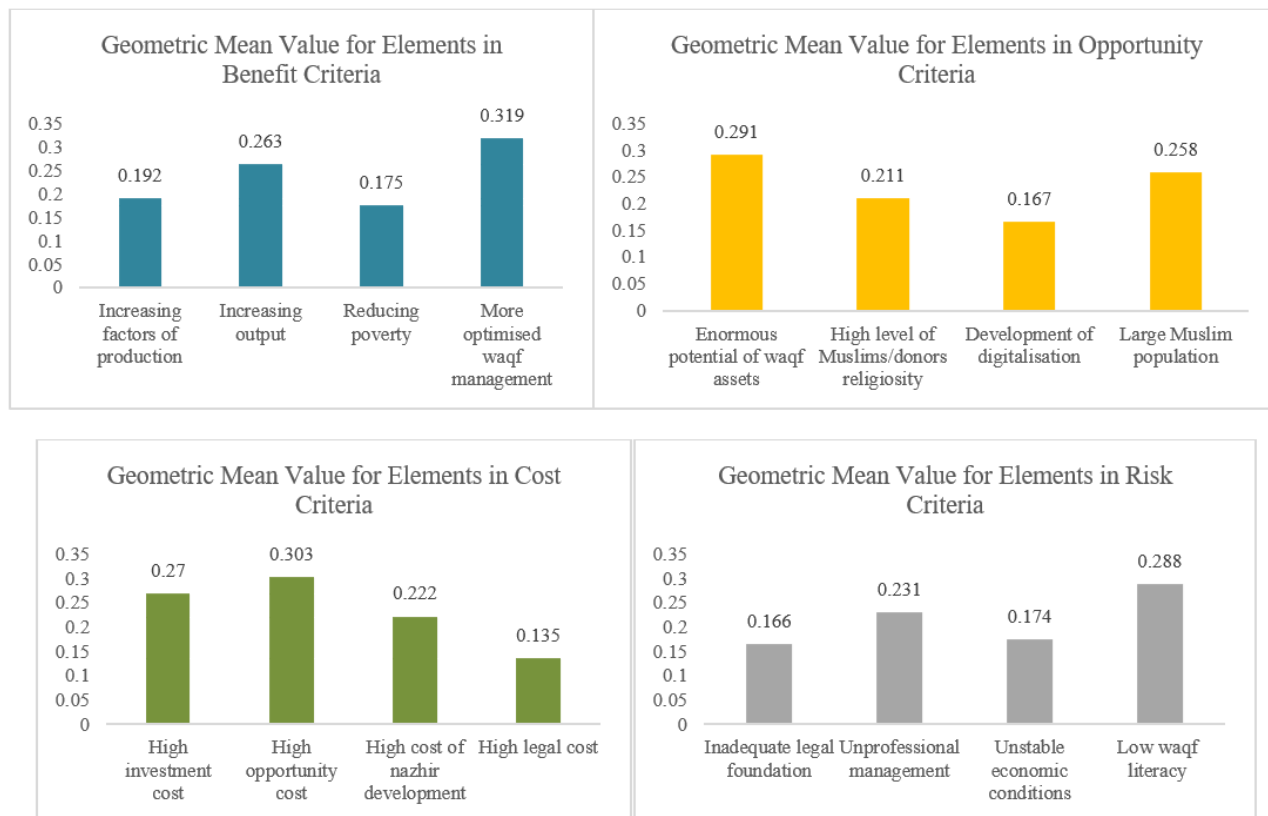
#### 4.1.2. Priority of Sub-Elements in Each BOCR Criteria

In each BOCR criterion, there are several sub-elements that will also be considered in implementing the productive *waqf* model, as described in Figure 9. Based on the geometric mean value among the sub-elements within the benefit criteria, it is evident that more optimised *waqf* management holds the highest significance (31.9%). Therefore, this aspect should be given top priority when selecting the benefit criteria to be implemented in the productive *waqf* model. This finding aligns with Kasdi [48] assertion that productive *waqf* yields greater benefits compared to consumptive *waqf*. Productive *waqf* utilises *waqf* assets with the aim of generating profits that can be distributed to those in need [49], so that the management is more effective and efficient.

In the sub-elements contained in the opportunity criteria, the enormous potential of *waqf* assets is an opportunity that strongly supports the implementation of productive *waqf* models with a geometric mean value of 29.1%. Indonesia, as a country with the largest Muslim majority population in the world [50], has the potential to provide *waqf* assets that are large enough to be developed [51]. The magnitude of this potential is in accordance with the statement made by Badan Wakaf Indonesia (2023a), namely that the potential of cash *waqf* assets in Indonesia can reach IDR 180 trillion with a land *waqf* area of 420 hectares, although currently the realisation of *waqf* collection is not as large as its potential value, both in cash *waqf* and land *waqf*.

Regarding the cost criterion, the sub-element that has the highest geometric mean value is operational costs at 30.3%. In the implementation of the productive *waqf* model, this cost needs special attention because it can ensure the continuity and sustainability of the productive *waqf* programme. Operational costs need to be calculated as well as possible because they can be the basis for decision-making [52]. By understanding these costs, *nazhir* can evaluate operational efficiency, identify areas that require savings, and determine more effective *waqf* management strategies.

The last criterion is risk. In this criterion, there are priority sub-elements that need to be considered in the implementation of productive *waqf* models, namely low literacy with a geometric mean value of 28.8%. The lack of this aspect can have a negative impact on the collection of *waqf* funds, which in turn can hinder the growth of *waqf* in Indonesia [53]. Moreover, currently, Indonesia's national *Waqf* Literacy Index stands at 50.48, which indicates that Indonesia's *waqf* literacy is categorised as low [54].



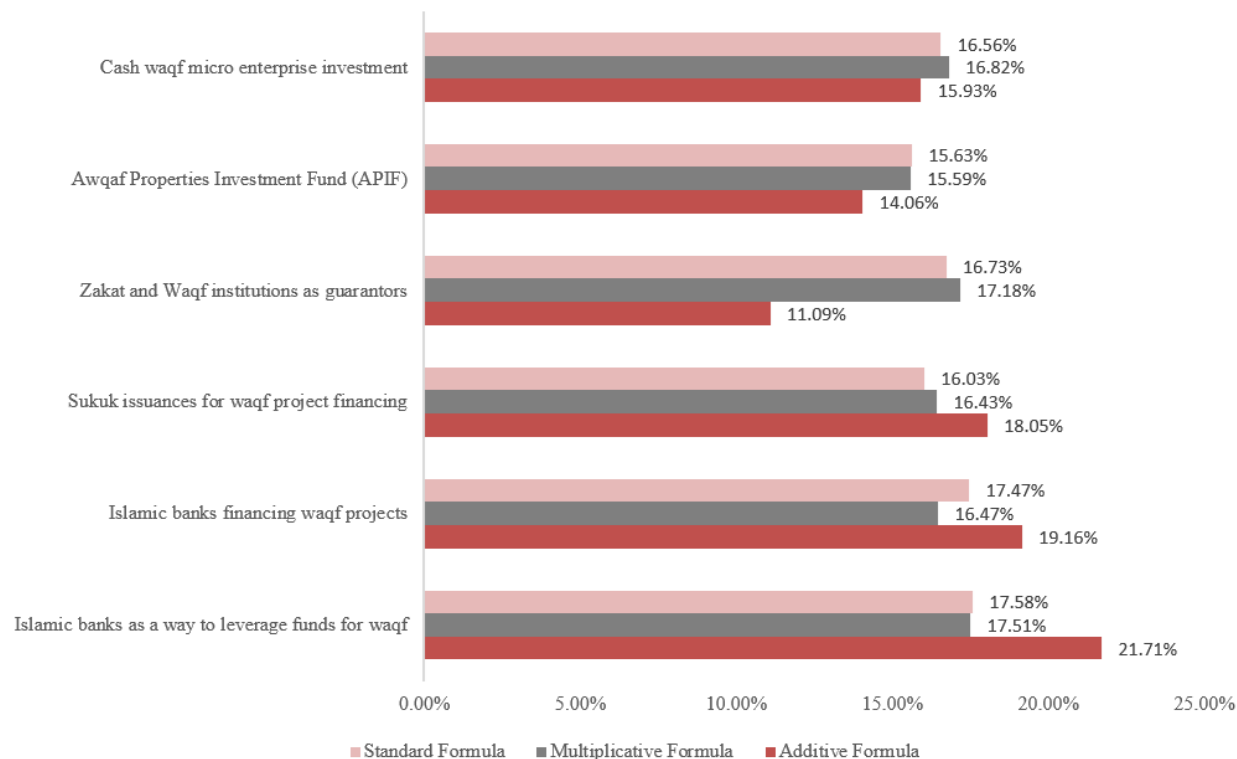
**Figure 9.**  
Geometric mean value of sub-element in each BOCR criteria.

#### 4.1.3. Prioritisation of Alternative Productive Waqf Models

This part will explain the alternative productive *waqf* models selected based on ANP-BOCR analysis using the standard formula, multiplicative formula, and additive formula, which can be seen in Figure 10. The selection of alternative models using the standard formula is calculated by dividing the geometric mean value of benefits by the geometric mean value of costs (B/C) in each alternative [40]. This means that the selection of alternative productive *waqf* models using this formula only considers the benefit and cost aspects. Based on Figure 10, the model of Islamic banks as a way to leverage funds for *waqf* is the most optimal (17.58%).

The priority of alternative productive *waqf* models for the short term will be calculated using the multiplicative formula, namely  $(B \cdot O / C \cdot R)$ . With this formula, it is believed that the relative measurement has the same magnitude, so it will not produce negative values, and the result is seen as short-term [40]. Based on this calculation, it is concluded that the most optimal alternative productive *waqf* model for the short term is an Islamic bank as a way to leverage funds for *waqf* (17.51%).

In the long term, the prioritisation of alternative productive *waqf* models is calculated using the additive formula, namely  $bB + oO - cC - rR$ . In this formula, b, o, c, and r represent the priority rankings of alternative productive *waqf* models, so that the final result can be negative and is considered long-term [40]. The results of this calculation also show that the most optimal alternative productive *waqf* model in the long term is Islamic banks as a way to leverage funds for *waqf* (21.71%).



**Figure 10.**  
Prioritisation of alternative productive *waqf* models.

Based on the assessment that has been conducted using the three types of formulas above, Islamic banks as a way to leverage funds for *waqf* are selected as the most optimal alternative productive *waqf* model. This is based on the fact that Islamic banks have the expertise to manage *waqf* funds efficiently and effectively. In their operational activities, Islamic banks conduct feasibility studies, monitoring, and reporting related to the use of *waqf* funds to ensure that the benefits generated are in accordance with the purpose of *waqf*. Moreover, the existence of Islamic banks as *nazhir* has been supported by regulations stipulated in the Financial Sector Development and Strengthening Law (PPSK Law) Article 4 Paragraph 3 [55]. This shows the significant potential of Islamic banks in optimising the collection and management of cash *waqf* [56].

#### 4.2. Meta-Analysis

As a form of validation of the previously reported result, this study also conducted a meta-analysis in order to strengthen the argument for the implementation of the prioritised productive *waqf* model, namely Islamic banks as a way to leverage funds for *waqf*. To ensure that the implementation of this model can actually provide significant benefits, especially in terms of increasing economic growth, this analysis will show how much influence the utilisation of social funds (including *waqf*) by Islamic financial institutions (including Islamic banks) has on people's welfare.

From the search results on Google Scholar, 10 research papers related to the topic in this study were obtained and fulfilled the required criteria, such as having quantitative findings in the form of Pearson correlation values ( $r$ ). Table 3 shows a summary of the effect calculations obtained through the Wald test.

**Table 3.**  
Summary effect calculation.

	Estimate	Standard error	z	p	95% confidence interval	
					Lower	Upper
Intercept	0.596	0.083	7.149	<.001	0.433	0.760

Based on the results in Table 3, there is a strong and significant correlation between the utilisation of social funds by Islamic financial institutions and community welfare, as indicated by the effect size value of 59.6% and p-value < .001. This is also in line with research conducted by Ismail and Cahyo (2017), which states that Islamic banks, as one of the Islamic financial institutions, can improve community welfare through the products and services they offer. Islamic banks also have an important role as intermediary institutions that can collect and invest these funds in sharia-compliant instruments. Thus, the profits earned can be reused to support a number of projects that can encourage economic empowerment, promote education, and improve the health system so that they can ultimately improve social welfare [58], [59].

#### 4.3. BOCR Assessment Analysis

There are assessment results obtained based on previous related literature as the author's insight into each model on each BOCR sub-criteria. The assessment can be seen in Table 4.

**Table 4.**  
BOCR matrix.

	Islamic banks as a way to leverage funds for <i>waqf</i>	Islamic banks financing <i>waqf</i> projects	Sukuk issuances for <i>waqf</i> project financing	<i>Zakat and waqf</i> institutions as guarantors	Awqaf Properties Investment Fund (APIF)	Cash <i>waqf</i> microenterprise investment
Benefit						
Increasing factors of production	+1	+0.75	+1	+1	+1	+1
Increasing output	+1	+1	+1	+1	+1	+1
Reducing poverty	+1	+1	+1	+1	+1	+1
More optimised <i>waqf</i> management	+1	+1	+1	+0.25	+0.75	+0.5
Opportunity						
Enormous potential of <i>waqf</i> assets	+1	+1	+1	+0.75	+1	+1
High level of Muslim/donors religiosity	+1	+1	+1	+1	+1	+1
Development of digitalisation	+0.75	+0.75	+1	+0.75	+1	+0.5
Large Muslim population	+1	+1	+1	+1	+1	+1

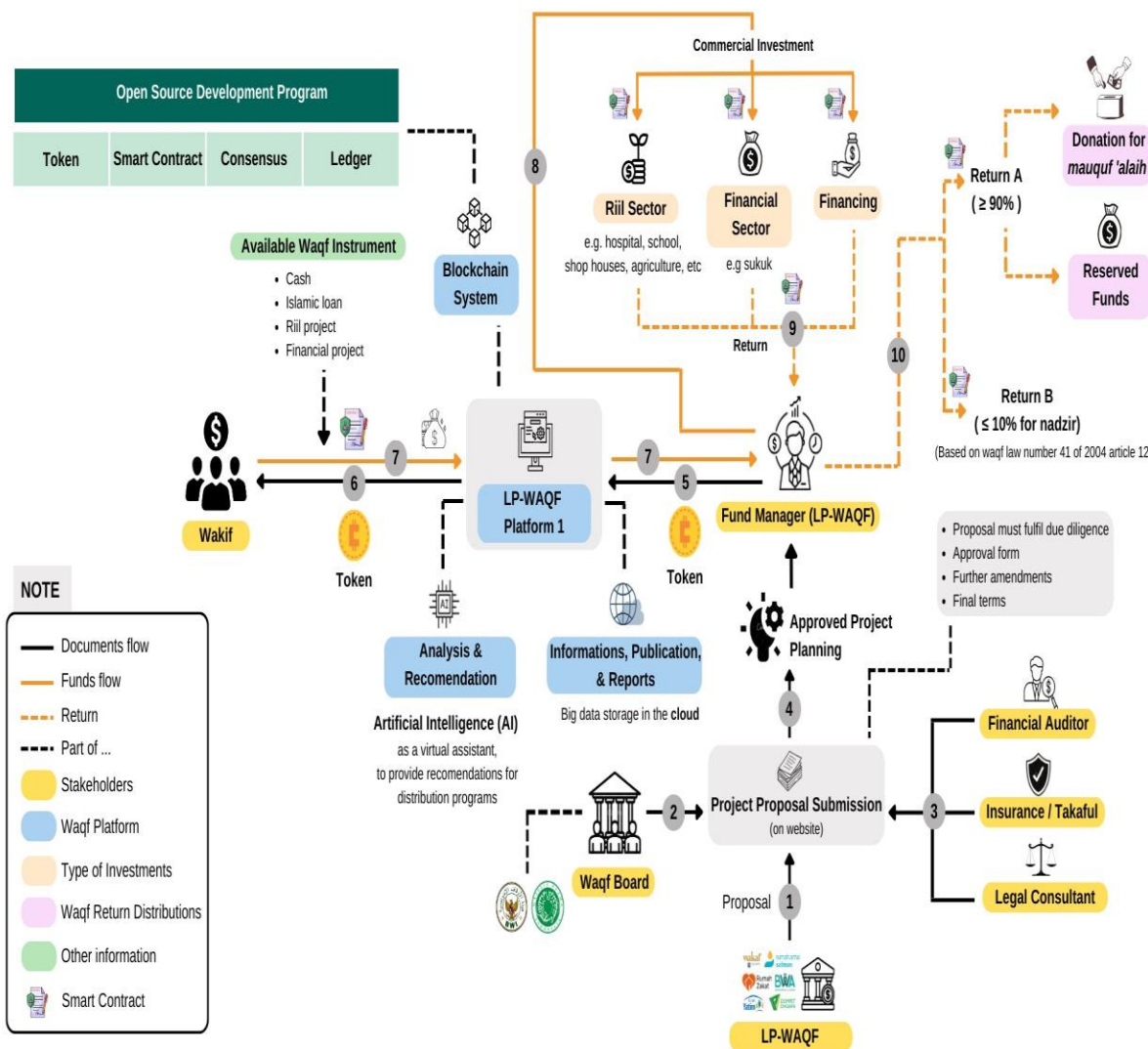


	Islamic banks as a way to leverage funds for <i>waqf</i>	Islamic banks financing <i>waqf</i> projects	Sukuk issuances for <i>waqf</i> project financing	<i>Zakat</i> and <i>waqf</i> institutions as guarantors	Awqaf Properties Investment Fund (APIF)	Cash <i>waqf</i> microenterprise investment
Cost						
High investment cost	-0.5	-0.5	-1	-1	-1	-0.5
High operational cost	-1	-1	-1	-1	-1	-1
High cost of <i>nazhir</i> development	-1	-1	-0.5	-1	-1	-1
High legal cost	-0.75	-0.75	-1	-1	-1	-1
Risk						
Inadequate legal foundation	-0.75	-0.75	-1	-1	-0.25	-1
Unprofessional management	-0.5	-0.5	-1	-1	-0.25	-1
Unstable economic conditions	-0.5	-0.5	-1	-0.75	-1	-1
Low <i>waqf</i> literacy	-1	-1	-1	-1	-1	-1
Total	+1.75	+1.5	+0.5	-1	+1.25	-0.5

Based on the arguments given to each model in each BOCR sub-criteria (Appendix 3), Islamic banks as a way to leverage funds for *waqf* have the highest score among other models. Thus, this model is the most important to be implemented in Indonesia. This is because Islamic banks have an important role in performing social functions and intermediation functions that are able to connect parties who experience a surplus of funds with parties who experience a lack of funds. The connection between these parties is able to increase the usability of money so that it can move the wheels of the economy [60]. For this reason, Islamic banks have considerable potential for accepting cash *waqf* and becoming credible places to manage *waqf* funds [61].

#### 4.4. An Alternative Model of Productive *Waqf* through Digitalisation

To optimise *waqf* activities, this study builds an alternative productive *waqf* model by incorporating several technologies such as blockchain, Artificial Intelligence (AI), cloud computing, big data, and digital platform in order to increase efficiency, transparency, and accessibility of *waqf* management. Figure 11 illustrates the implementation of the productive *waqf* digitalisation model in Indonesia.



**Figure 11.** Scheme for implementation of productive waqf digitalisation model in Indonesia.

In this alternative model, a digital platform owned by a single *waqf* collecting institution or *Lembaga Pengumpul* (LP), referred to as LP-WAQF Platform 1, is used to facilitate *waqifs* to make online donations to designated programmes. This platform can be accessed through a mobile phone application and a website. There are several stages in this scheme, as follows:

1. Initially, LP-Waqf, acting as a *nazhir*, will submit proposals related to *waqf* fund management programmes to a dedicated website. These proposals must contain the implementation and legal aspects of the programmes, which include the business model, legal entities involved, parties conducting the Initial Coin Offering (ICO), and details about the tokenomics (issuance, distribution, type, governance, price, tokens supply, as well as incentives for parties contributing to the blockchain system).
2. The *waqf* board consists of authorities, namely the Indonesian *Waqf* Board or *Badan Wakaf Indonesia* (BWI) and National Sharia Board – Indonesian Ulama Council or *Deewan Syariah Nasional – Majelis*

*Ulama Indonesia* (DSN-MUI), which have functions to regulate and supervise *waqf* activities. They will evaluate the proposed programmes and their compliance with Sharia law.

3. Aside from the *waqf* board, financial auditors and legal consultants will review and approve proposals, as well as provide recommendations that ensure the programmes' credibility. Insurance will be imposed to guarantee the productive *waqf* project, as mandated in Article 43 of Law of the Republic of Indonesia Number 41 of 2004.
4. Proposals that have been approved by the *waqf* board, financial auditors, and legal consultants will be conveyed to the fund manager.
5. The fund manager will conduct an ICO, which is an activity to raise funds from donors by selling crypto assets or tokens [63]. The fund manager will issue tokens according to the amount needed by each programme.
6. *Waqifs* who have registered on the LP-WAQF Platform 1 can purchase the issued tokens using fiat money.
7. Funds raised through token sales will be held in the fund manager's escrow account until the available token limit is reached. If the pre-determined purchase target is not met, the raised funds will be returned to *waqifs*.
8. Once the purchase of tokens reaches the available limit, the fund manager will distribute the tokens to designated commercial programmes, which may be directed to the real sector, Islamic financial securities, or return-bearing financing.
9. Commercial programmes will generate returns.
10. A maximum of 10% of productive *waqf* programmes' returns will be distributed for *nazhir*, whilst a minimum of 50% will be assigned for *mauquf 'alaih*, or parties designated to benefit from the management of *waqf* assets. The remaining returns will be allocated for insurance costs, reinvestments, asset recovery costs, and costs for risks related to *waqf* asset management. This allocation is regulated by Indonesian *Waqf* Board Regulation Number 01 of 2020.

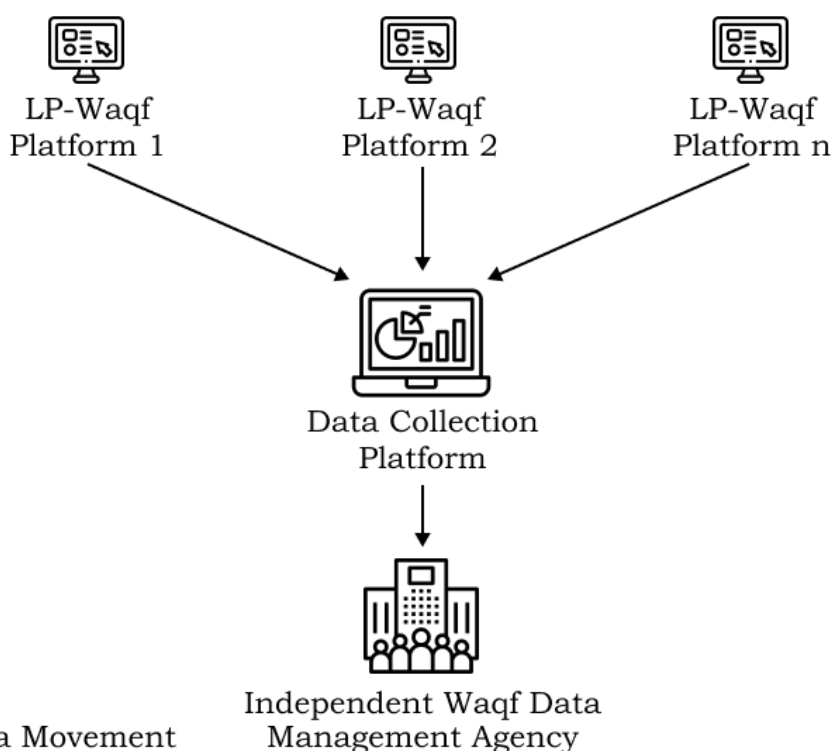
The application of each technology in the productive *waqf* digitalisation model is described in Table 5.

**Table 5.**  
Technology applications in the productive *waqf* digitalisation model.

Technology	Function
Blockchain	<ol style="list-style-type: none"> <li>a. Records all transactions in a transparent and unalterable manner.</li> <li>b. Enables platform users to track the flow of the <i>waqf</i> fund.</li> <li>c. Runs smart contracts to automatically execute transactions when meeting certain conditions, eliminating the need for third parties. For instance, automation of <i>waqf</i> funds distribution to each programme, sends confirmation of successful transactions to donors, distributes returns obtained from revenue generated from programmes to specified parties, and monitoring Anti-Money Laundering and Counter-Terrorist Financing (AML CTF).</li> </ol>
Big data	<ol style="list-style-type: none"> <li>a. Integrates any kind of data, both structured and unstructured.</li> <li>b. Referring to Saleh, et al. [65], in addition to storing data in a decentralised system of blockchain, big data will be stored in a centralised database. These data can be used for reporting purposes.</li> </ol>
AI	<ol style="list-style-type: none"> <li>a. Automatically performs descriptive, predictive, and prescriptive analyses that allows LP-WAQF to make data-driven decisions.</li> <li>b. Provides <i>waqf</i> programme recommendations for <i>waqifs</i> in accordance with their interests.</li> <li>c. Enables the deployment of a chatbot or virtual assistant that automates interactions between <i>waqif</i> and customer support.</li> <li>d. Detects anomalies in transactions.</li> </ol>

Technology	Function
Cloud computing	a. Provides data storage for storing big data that can be accessed anytime and anywhere, as long as an internet connection is available.
Platform digital	a. An online platform for LP- <i>WAQF</i> to upload its <i>waqf</i> programmes. b. An online platform for <i>waqifs</i> to select their preferred <i>waqf</i> programmes. c. An online platform available for both registered and unregistered users to access <i>waqf</i> fund management reports.

Data obtained from digital platforms owned by each LP-*Waqf*, such as information about *waqifs*, collection, distribution, and other relevant data, will be shared with an independent institution responsible for managing *waqf* data, through a data collection platform, as illustrated in Figure 12. The objective of data distribution is to realise national *waqf* data integration, which is essential to facilitate the analysis of the *waqf*'s condition in Indonesia. As an example, integration of data can prevent inequality in *waqf* fund distribution among regions and become the basis for *nazhir*'s performance evaluation and policy formulation [66].



**Note:**

→ Data Movement

**Figure 12.**

*Waqf* data distribution scheme.

**Source:** Modified from Gleason [67].

The development of the data collection platform can be carried out either by the independent institution itself or by utilising cloud computing services, specifically a Software as a Service (SaaS). Eightwire, is an example of a SaaS company that offers efficient and secure data sharing services. They have established a digital platform to facilitate data sharing between the New Zealand government and non-governmental organisations (NGOs) [67].

## 5. Conclusion, Implication and Recommendation

Based on the results above, it shows that Islamic banks as a way to leverage funds for *waqf* are the most prioritised model to be implemented in Indonesia, because Islamic banks are able to optimise *waqf* activities. This is also supported by the results of meta-analyses and several supporting arguments that show that Islamic financial institutions (including Islamic banks) can improve community welfare through the utilisation of social funds (including *waqf*). Besides that, this research also discusses an alternative model of productive *waqf* through digitalisation by adopting several technologies that aim to increase efficiency, transparency, and accessibility so as to optimise the collection and management of *waqf* funds effectively and efficiently.

In practice, the implementation of Islamic banks as a way to leverage funds for *waqf* may face several obstacles, such as the absence of clear regulations due to the new nature of Islamic banks as *nazhir* and a lack of transparency, accountability, and risk management. This can have implications for the unclear governance of *waqf* funds and increase the risk of misuse of funds that are not in accordance with the purpose of *waqf*.

To overcome these problems, the Indonesian government needs to develop comprehensive regulations related to governance, transparency, effective supervision, and provisions for the use of *waqf* funds in accordance with *sharia* principles. As for Islamic banks, strict policies and procedures for managing risks related to *waqf* funds must be implemented. This includes identification, measurement, control, and continuous monitoring of risks. Islamic banks should also ensure that they have qualified employees who have good capabilities in banking management as well as risk mitigation.

Meanwhile, to optimise the collection and mobilisation of *waqf* funds, this research builds an alternative productive *waqf* model that uses several technologies. Despite the benefits of technologies adopted, such as transparency and a decentralised system, there are risks may arise such as fraud, cyberattack and personal data leakage.

This can have implications for the loss of donor funds, which can hinder the distribution of funds and reduce public confidence in *waqf*.

Hence, it is necessary to ensure that the technology system uses strong cryptographic algorithms to protect data and transactions, such as implementing digital signatures to verify the authenticity and integrity of data and two-factor authentication.

The implementation of this alternative model may lead to high investment costs, which could potentially impact the development of the model. To solve this problem, the Indonesian government could collaborate with other parties interested in implementing these technologies so that the costs and risks can be shared.

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## Appendix

### Appendix 1. ANP-BOCR analysis results.

#### Rater agreement results

**Table 6.**  
Rater agreement of Delphi.

Criteria	Kendall's W
Benefit	0.624**
Opportunity	0.902***
Cost	0.657**
Risk	0.641**

**Note:** \*\*\*significant at 0.01 level; \*\*significant at 0.05 level; \*significant at 0.10 level.

#### Priority of BOCR criteria

**Table 7.**  
Criteria for cluster priority.

Criteria	Value	Ranking
Benefit	0.374	1
Opportunity	0.270	2
Cost	0.154	3
Risk	0.130	4
Inconsistency	0.000	
Kendall's W	0.536	
X <sub>2</sub>	11.262	
p-value	0.010**	

**Note:** \*\*\*significant at 0.01 level; \*\*significant at 0.05 level; \*significant at 0.10 level.

## Priority of sub-elements in each BOCR criteria

**Table 8.**  
Benefit sub-network priority.

Criteria	Value	Ranking
Increasing factors of production	0.192	3
Increasing output	0.263	2
Reducing poverty	0.175	4
More optimised <i>waqf</i> management	0.319	1
Inconsistency	0.009***	
Kendall's W	0.145	
X <sup>2</sup>	3.050	
p-value	0.384	

Note: \*\*\*significant at 0.01 level; \*\*significant at 0.05 level; \*significant at 0.10 level.

**Table 9.**  
Opportunity sub-network priority.

Criteria	Value	Ranking
Enormous potential of <i>waqf</i> assets	0.291	1
High level of Muslims/donors religiosity	0.211	3
Development of digitalisation	0.167	4
Large Muslim population	0.258	2
Inconsistency	0.010***	
Kendall's W	0.165	
X <sup>2</sup>	3.462	
p-value	0.326	

Note: \*\*\*significant at 0.01 level; \*\*significant at 0.05 level; \*significant at 0.10 level.

**Table 10.**  
Cost sub-network priority.

Criteria	Value	Ranking
High investment cost	0.270	2
High investment cost	0.303	1
High cost of <i>nazhir</i> development	0.222	3
High legal cost	0.135	4
Inconsistency	0.009***	
Kendall's W	0.349	
X <sup>2</sup>	7.324	
p-value	0.062	

Note: \*\*\*significant at 0.01 level; \*\*significant at 0.05 level; \*significant at 0.10 level.

**Table 11.**  
Risk sub-network priority.

Criteria	Value	Ranking
Inadequate legal foundation	0.166	4
Unprofessional management	0.231	2
Unstable economic conditions	0.174	3
Low <i>waqf</i> literacy	0.288	1
Inconsistency	0.009***	
Kendall's W	0.112	
X <sup>2</sup>	2.354	
p-value	0.502	

**Note:** \*\*\*significant at 0.01 level; \*\*significant at 0.05 level; \*significant at 0.10 level.

## Appendix 2. Meta-analysis results

**Table 12.**  
Summary of research for meta-analysis.

Variable	No	Author	Year	N	r
Utilisation of social funds	1	Putri and Prahesti [68]	2017	36	0.396
	2	Soekamto [69]	2019	33	0.271
	3	Tanjung [70]	2019	32	0.318
	4	Efendi and Ardhiastuti [71]	2020	47	0.593
	5	Rahayu and Anwar [72]	2021	31	0.638
	6	Kausar [73]	2022	71	0.722
	7	SN, et al. [74]	2022	40	0.450
	8	Apriliani and Pradana [75]	2022	38	0.729
	9	Ghifar and Prestianawati [76]	2023	30	0.247
	10	Ramadhanti and Suryaningsih [77]	2023	30	0.659

**Table 13.**  
Heterogeneity test.

	Estimate
$\tau^2$	0.040
$\tau$	0.201
I <sup>2</sup> (%)	58.754
H <sup>2</sup>	2.424

**Table 14.**  
Regression test for funnel plot asymmetry (Egger's Test).

	Z	P
sei	-1.896	0.058

**Appendix 3.** BOCR Analysis of each Integration Models of Islamic Social and Commercial Finance

**Note:** B1 = Increasing factors of production  
 B2 = Increasing output  
 B3 = Reducing poverty  
 B4 = More optimised *waqf* management  
 O1 = Enormous potential of *waqf* assets  
 O2 = High level of Muslim/donors religiosity  
 O3 = Development digitalization  
 O4 = Large Muslim population  
 C1 = High investment cost  
 C2 = High operational cost  
 C3 = High cost of *nazhir* development  
 C4 = High legal cost  
 R1 = Inadequate legal foundation  
 R2 = Unprofessional management  
 R3 = Unstable economic conditions  
 R4 = Low *waqf* literacy

**Table 15.**  
 Islamic banks as a way to leverage funds for *waqf*.

Islamic banks as a way to leverage funds for <i>waqf</i>		Score	
Benefits	B1	It acts as an LKS-PWU (Sharia Financial Institution-Recipient of Cash <i>Waqf</i> ) that is able to increase production factors in the form of capital [5].	+1
	B2	<i>Waqf</i> funds that are managed and designated for various projects have the potential to produce outputs such as public facilities that are beneficial for the people [78].	+1
	B3	The Islamic Banking Law mandates Islamic banks to carry out social functions such as receiving funds from <i>waqf</i> or other social funds to help the poor and people in need [79].	+1
	B4	Islamic banks are able to optimise <i>waqf</i> management and utilise funds for <i>waqf</i> purposes [80].	+1
Opportunities	O1	Islamic banks, as intermediary institutions (able to receive <i>waqf</i> fund deposits), have considerable asset potential [49].	+1
	O2	A survey conducted by the Pew Research Center [81] shows that Indonesia has the highest level of religiosity, which affects the high potential of <i>waqf</i> collection [82].	+1
	O3	The digitalisation aspect can be a considerable opportunity in the collection and management of <i>waqf</i> funds [83], although certain digital platforms are still centralised, which has the risk of data hacking.	+0.75
	O4	Indonesia is a country with the largest Muslim population in the world, which has the potential to gain substantial <i>waqf</i> fund revenue [84].	+1
Costs	C1	The high potential of <i>waqf</i> assets can be utilised in the calculation of economies of scale, where relative costs are divided by a large number of assets so that the investment cost per unit can be lower.	-0.5
	C2	The high operating costs of Islamic banks are partly due to the absence of cost standards for different types of businesses.	-1
	C3	This cost can be influenced by the need for <i>nazhirs</i> to manage <i>waqf</i> based on modern business management that is not only socially oriented but also profit-oriented in order to reduce operational expenses.	-1
	C4	The regulatory framework for Islamic banking in Indonesia is quite complex, but aims to ensure that <i>waqf</i> funds are managed in accordance with <i>sharia</i> principles.	-0.75
Risks	R1	The legal foundation of Islamic banks is still in the expansion stage. But currently, the Financial Sector Development and Strengthening Law (PPSK Law) has been passed to strengthen Islamic banks as <i>nazhir</i> [85].	-0.75
	R2	Islamic banks have implemented the principles of Good Corporate Governance (GCG) to minimise the risk of unprofessional management [86].	-0.5

	R3	The Indonesian Minister of Finance considers that Islamic banks are better able to withstand economic crises and shocks compared to conventional banks [87].	-0.5
	R4	Public understanding of Islamic financial services and products is still low, including <i>waqf</i> products [88]. So that it can lead to low interest in <i>waqf</i> .	-1
Total			+1.75

**Table 16.**Islamic banks financing *waqf* projects.

		<b>Islamic banks financing <i>waqf</i> projects</b>	<b>Score</b>
Benefits	B1	Islamic banks can provide flexible financing mechanisms [89], but there are still people who find it difficult to access this financing.	+0.75
	B2	Islamic banks provide <i>waqf</i> -based financing for projects that can produce outputs such as useful public facilities [78].	+1
	B3	Islamic banks can offer financing facilities for <i>waqf</i> projects that can promote economic growth and reduce poverty [90].	+1
	B4	Islamic banks can offer various financial services to <i>waqf</i> institutions for more optimised management [90].	+1
Opportunities	O1	Islamic banks have considerable asset potential, which can be channelled to finance various <i>waqf</i> projects [49].	+1
	O2	A survey conducted by Pew the Research Center [81] shows that Indonesia has the highest level of religiosity, which has a significant effect on the decision to donate [82].	+1
	O3	The digitalisation aspect can be a considerable opportunity in the distribution of <i>waqf</i> funds, but most are still centralised and at risk of data hacking.	+0.75
	O4	Indonesia is a country with the largest Muslim population in the world, which has considerable potential for <i>waqf</i> [84].	+1
Costs	C1	The distribution of <i>waqf</i> funds is constrained by investment costs that are influenced by market conditions, but the orientation of Islamic banks prioritises social goals that lead to lower-cost policies [91].	-0.5
	C2	The high operating costs of Islamic banks are partly due to the absence of cost standards for different types of businesses [92].	-1
	C3	This cost can be influenced by the need for <i>nazhirs</i> to manage <i>waqf</i> based on modern business management that is not only socially oriented but also profit-oriented in order to reduce operational expenses [93].	-1
	C4	The regulatory framework for Islamic banks in Indonesia is quite complex, but aims to ensure that <i>waqf</i> funds are channelled in accordance with <i>sharia</i> principles.	-0.75
Risks	R1	The legal foundation of Islamic banking is still in the expansion stage. However, OJK will provide a regulatory framework to improve the development of Islamic banking products [94].	-0.75
	R2	Islamic banks have implemented the principles of Good Corporate Governance (GCG) to minimise the risk of unprofessional management [86].	-0.5
	R3	The Indonesian Minister of Finance considers that Islamic banks are better able to withstand economic crises and shocks compared to conventional banks [87].	-0.5
	R4	Public understanding of Islamic financial services and products is still low,	-1

	including <i>waqf</i> products [88]. So that it can lead to low interest in <i>waqf</i> .	
Total		+1.5

**Table 17.**

Sukuk issuances for waqf projects financing.

		<b><i>Sukuk</i> issuances for <i>waqf</i> projects financing</b>	<b>Score</b>
Benefits	B1	<i>Sukuk</i> issuance is useful in providing funding for large-scale projects required by the government [95].	+1
	B2	<i>Sukuk</i> issuance is beneficial in increasing output through infrastructure development, procurement of equipment and machinery, financing of various sectors, etc. [96].	+1
	B3	<i>Sukuk</i> funding for social infrastructure projects such as schools, hospitals, and community centres play a role in alleviating poverty through improved access to education, health, etc [97].	+1
	B4	The issuance of <i>sukuk</i> can optimise <i>waqf</i> management through the distribution of more stable financing for <i>waqf</i> projects, which can provide sustainable benefits [98].	+1
Opportunities	O1	The large potential of <i>waqf</i> assets in <i>sukuk</i> issuance can also be allocated for infrastructure needs, thus providing significant financial benefits for the issuer [99].	+1
	O2	A survey conducted by the Pew Research Center [81] shows that Indonesia has the highest level of religiosity, which has a significant effect on <i>waqf</i> decisions [82].	+1
	O3	Digitalisation in the Islamic finance industry (including <i>sukuk</i> ) has more significant opportunities for solving the problems of financial inclusion and lack of legislation [100].	+1
	O4	Indonesia is a country with the largest Muslim population in the world, which has considerable potential for <i>waqf</i> [84].	+1
Costs	C1	The high cost of investment is partly due to double taxation, even though investors view <i>sukuk</i> as not worthy of taxation because it is considered a pay-on-paper transaction [101].	-1
	C2	Operating costs on <i>sukuk</i> can include administrative costs, structuring costs, and the initial issuance of <i>sukuk</i> , which tend to be higher compared to standard securities [102].	-1
	C3	The issuance of <i>sukuk</i> requires high costs in the process of <i>nazhir</i> development. However, this is considered a long-term investment because the presence of competent managers can increase investor confidence and trust [103].	-0.5
	C4	The high legal costs of <i>sukuk</i> issuance are due to the need to harmonise the legal framework with <i>sharia</i> principles and resolve legal issues that are not in accordance with <i>sharia</i> standards [104].	-1
Risks	R1	The legal framework that accommodates the Islamic financial system is still very lacking, so market participants choose to wait for certainty from the government [105]. This can ultimately hinder the development of <i>sukuk</i> issuance.	-1
	R2	Unprofessional management can result in decreased investor confidence, increased risk of default (inability to repay <i>sukuk</i> principal) [106].	-1
	R3	Macroeconomic stability conditions have a significant influence on <i>sukuk</i> [107]. In this case, unstable economic conditions can affect the decline in	-1



		sukuk value.	
	R4	Public awareness and knowledge about <i>sukuk waqf</i> are still quite low [108], thus affecting the low interest of corporations in investing in <i>sukuk</i> [109].	-1
<b>Total</b>			<b>+0.5</b>

**Table 18.**

Zakat and waqf institutions as guarantors.

		<b>Zakat and waqf institutions as guarantors</b>	<b>Score</b>
Benefits	B1	Productive <i>zakat</i> and <i>waqf</i> programmes are able to provide assistance and support in the form of business capital for <i>gharimin</i> [110].	+1
	B2	<i>Zakat</i> and <i>waqf</i> institutions are able to improve the welfare of <i>gharimin</i> [111].	+1
	B3	Providing assistance to <i>gharimin</i> is able to provide relief so that, in the end, it can alleviate the problem of poverty [110].	+1
	B4	Optimisation is done through effective governance and distribution strategies. However, based on the BAZNAS report (2019), the distribution of <i>zakat</i> to <i>gharimin</i> is still very lacking.	+0.25
Opportunities	O1	<i>Zakat</i> and <i>waqf</i> institutions have great asset potential because they are responsible for managing the assets given by donors, although the realisation is still very minimal [113]s.	+0.75
	O2	A survey conducted by the Pew Research Center [81] shows that Indonesia has the highest level of religiosity, which has a significant effect on <i>zakat</i> and <i>waqf</i> decisions [82].	+1
	O3	There is considerable opportunity in the application of digitalisation systems to further simplify the process of collecting and distributing <i>zakat</i> and <i>waqf</i> funds to <i>gharimin</i> [114], although most are still centralised.	+0.75
	O4	Indonesia is a country with the largest Muslim population in the world, which has considerable potential for <i>waqf</i> and <i>zakat</i> [84].	+1
Costs	C1	This high cost can be influenced by the complex needs of <i>gharimin</i> , such as requiring long-term assistance and comprehensive assistance covering various aspects of life [115].	-1
	C2	These costs can be caused by high salaries for administrators [116], low assistance from the government [117], the scale and complexity of the institution, etc.	-1
	C3	These costs may include training costs to develop the technical, personal, and psychological skills of the <i>nazhir</i> to be able to manage and distribute funds as intended, especially for <i>gharimin</i> [118].	-1
	C4	The substantial expenses may arise due to reasons like lack of familiarity with legal stipulations [119], conflicts with external parties, administrative errors, and so forth.	-1
Risks	R1	The absence of legal protection of <i>zakat</i> and <i>waqf</i> assets is a major factor in the absence of new <i>zakat</i> and <i>waqf</i> institutions to assist <i>gharimin</i> [120].	-1
	R2	Unprofessional management of <i>zakat</i> and <i>waqf</i> funds, such as a lack of transparency in conducting financial reporting, will affect the lack of trust of <i>muzaki/waqif</i> [121], so that the distribution of <i>gharimin</i> will be hampered.	-1
	R3	This risk can lead to a decrease in donation income, an increase in the number of <i>gharimin</i> , difficulties in fund management, etc. However, the level of public awareness of giving <i>zakat</i> is relatively stable despite unstable economic conditions [112].	-0.75

	R4	The <i>waqf</i> and <i>zakat</i> literacy index in Indonesia is still classified as low and medium, which can have an impact on the lack of public awareness and participation [121].	-1
Total			-1

**Table 19.**

Awqaf properties investment fund (APIF).

Awqaf Properties Investment Fund (APIF)			Score
Benefits	B1	APIF acts as a provider of funds to build commercial and residential assets, expand employment opportunities, and lead to social and economic utilisation [122].	+1
	B2	The funding channelled by APIF is able to produce optimal outputs in terms of increased welfare, profit and wealth, education, etc. [122].	+1
	B3	APIF is beneficial in alleviating the poverty problems of Muslim communities in both IsDB member and non-member countries through improving education, skills, and so on [122].	+1
	B4	APIF optimises financial management for beneficiaries [122] and also asset management through the development of <i>waqf</i> real estate properties, but the high cost of initial funding means that projects in Indonesia are not yet covered by APIF [123].	+0.75
Opportunities	O1	The large potential of <i>waqf</i> assets can help decentralise decision-making, financing, and implementation of development in APIF [122].	+1
	O2	A survey conducted by the Pew Research Center [81] shows that Indonesia has the highest level of religiosity, which has a significant effect on the decision to donate [82].	+1
	O3	The use of digital platforms at APIF has the potential to improve quality, oversight, and transparency, for example, in terms of knowing the distribution of projects [122].	+1
	O4	Indonesia is a country with the largest Muslim population in the world, which has considerable potential for <i>waqf</i> [84].	+1
Costs	C1	APIF has high investment cost constraints, requiring a minimum APIF project value of US\$5 million and a minimum contribution from the <i>nazhir</i> of 25% of the project value [122].	-1
	C2	APIF's high operational costs are partly due to technical assistance grants channelled to beneficiaries as well as the provision of operational costs after project completion [122].	-1
	C3	APIF considers the requirements set by the <i>waqif</i> regarding the use of <i>waqf</i> assets by the <i>nazhir</i> , so that the <i>nazhir</i> is required to be professional and superior to the <i>nazhir</i> in traditional <i>waqf</i> practices [122].	-1
	C4	APIF emphasises control and supervisory functions. This includes internal and external controls as well as <i>shariah</i> compliance controls, and therefore has high legal costs [122].	-1
Risks	R1	APIF receives support from the IsDB, which acts as a <i>mudharib</i> (manager and custodian of APIF) in legal procurement and KYC implementation from the beginning [122] minimising the risk of misuse of funds due to a weak regulatory framework.	-0.25
	R2	APIF has a strict governance structure and oversight of <i>waqf</i> , selecting appropriate investment formulas and emphasising the achievement of <i>waqf</i> objectives so as to minimise the risk of losing the rights of <i>waqf</i> beneficiaries	-0.25

		[122].	
	R3	This risk may lead to a decline in property prices, demand, currency exchange rates (as in the case of Towfiq Trust), revenues, and profits from property assets managed by APIF [124].	-1
	R4	Lack of understanding and awareness of the concept and benefits of APIF has resulted in low public interest in participating in APIF investments [122].	-1
Total			+1.25

Table 20.

Cash waqf microenterprise investment.

		Cash waqf microenterprise investment	Score
Benefits	B1	It is useful in providing factors of production in the form of alternative sources of financing for microenterprises. By utilising cash waqf financing, SMEs can expand their businesses through partnerships with Cash Waqf Institutions (CWIs) [125].	+1
	B2	It can increase output in the form of skill and capacity development, quality improvement, product diversification, and the creation of new jobs [126].	+1
	B3	Business capital provided to microenterprise actors can encourage business development and reduce dependence on social assistance [127], so that it can lead to a level of welfare.	+1
	B4	This model is intended as a form of productive waqf empowerment that is considered more optimal than the distribution of consumptive waqf [128], but is still constrained by the lack of supporting infrastructure, funding, human resources, technology, etc. [129].	+0.5
Opportunities	O1	The enormous potential of waqf assets can support community empowerment and build productive businesses [130].	+1
	O2	A survey conducted by the Pew Research Center [81] shows that Indonesia has the highest level of religiosity, which has a significant effect on waqf decisions [82].	+1
	O3	The development of digitalisation has the potential to encourage the expansion of microenterprises [131], as well as being a challenge for business actors who do not understand technology and only focus on traditional production activities [132].	+0.5
	O4	Indonesia is a country with the largest Muslim population in the world, which has considerable potential for waqf [84].	+1
Costs	C1	This model uses a <i>musharakah mutanaqisah</i> contract so that the investment costs incurred by microenterprises can be lower because they are also covered by CWI [129].	-0.5
	C2	The elevated operational expenditures are impacted by the comparatively smaller scale of assets, which in turn affects the limited business efficiency [133].	-1
	C3	<i>Nazhirs</i> are obliged to manage waqf assets to assist microenterprise development, so <i>nazhirs</i> must have good skills [134]. Therefore, high costs are required to support the improvement of <i>nazhir</i> quality.	-1
	C4	High legal costs cause many microenterprises in Indonesia not to have a clear legal entit, do not have a business license, and have difficulty obtaining permits [135].	-1
Risk	R1	Inadequate legal foundation is one of the main factors that can hinder microenterprises from accessing external financing [36].	-1

R2	Lack of management skills can reduce the competitiveness of microenterprises in a global context [136]. It can also lead to asset misappropriation, [33], hindering microenterprise growth.	-1
R3	Economic instability can affect investor interest and bad credit, which can threaten the sustainability of microenterprises [137].	-1
R4	Literacy on cash <i>waqf</i> among Muslims is still limited due to traditional perceptions [138], which can hinder growth and cause losses in microenterprise investments.	-1
Total		-0.5