



Statistical Evaluation of Rater Agreement on Waqf Takaful Research in Malaysia

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Abstract

Many scholars and institutions in Malaysia are examining how waqf can be utilized in the Takaful sector. This is especially true when coming up with new ways to help groups that are struggling financially, like those who have been affected by natural disasters. The goal of this study is to find out what experts in the field think about the proposed Waqf-based Takaful model in Malaysia in terms of its usefulness, structure, and importance. The study used Cohen's Kappa, a statistical tool, to see how consistent expert evaluations were across the model's main thematic parts. The assessors were provided with a systematic assessment tool for their use, and the results were subsequently analyzed to evaluate the reliability of their evaluations. The results show that there is a strong agreement among the evaluators, which suggests that most of them agree that Waqf Takaful is a good way to make sure that everyone is financially secure. This study shows how to use inter-rater reliability techniques in Islamic finance research. This proves the suggested model and adds to what we already know about methodology. People are currently talking about what this means for future academic research, business use, and policy making.

1. Introduction

The demand for Takaful in Malaysia began in the 1960s after the Malaysian National Fatwa Committee's announcement on 15 June 1972, which asserted that conventional insurance contravenes Islamic principles due to the inclusion of prohibited elements such as gharar (uncertainty), riba (interest), and maisir (gambling) in its practices (Joni & Zuleika, 2017). Consequently, the Malaysian government established a specialized task force in 1982 to formulate an alternative insurance model following Shariah, which was later designated as Takaful (mutual aid). In 1984, Malaysia enacted the first Takaful legislation globally and established the initial Takaful operator, Syarikat Takaful Malaysia Berhad (STMB) (Bank Negara Malaysia, 2012). Six years following the establishment of the Takaful sector in Malaysia, the second Takaful operator, Takaful Nasional Sdn. Bhd. was founded (Alkhan & Hassan, 2020).

Unlike the original Takaful operator, this operator utilizes an agency system as a distribution channel to promote its products and provide services to Takaful members. Furthermore, the ASEAN Takaful Group and ASEAN ReTakaful International Ltd were founded in the 1990s. The Malaysian Government's affirmative support has enabled the industry's growth, culminating in 124 Takaful branches and more than 4,000 Takaful agents nationwide by 2000 (Annual Takaful Report, 2012). In 2001, Bank Negara Malaysia reinforced the Takaful sector through its financial sector master plan, designed to enhance the capabilities of Takaful operators within the industry's legal, Shari'ah, and regulatory frameworks (Mohd Zain et al., 2021).

This study aims to statistically evaluate the level of concordance among raters about significant themes and constructions related to Malaysian Waqf-based Takaful. This study aims to evaluate the reliability and validity of expert assessments regarding the applicability, structure, and efficacy of a proposed Waqf Takaful model in meeting the financial needs of communities affected by natural disasters, particularly in flood-prone states such as Kelantan, Terengganu, and Pahang. The study is structured as follows: An overview of Malaysia's flood circumstances and the significance of financial protection strategies is presented initially. The evolution of the Malaysian Takaful sector, encompassing its foundational concepts and contemporary models, is examined succinctly. The report presents the suggested Waqf-based Takaful model along with the supporting stakeholder theory in its major part. The study's conclusion offers recommendations for strengthening future Waqf Takaful research in Malaysia and presents a statistical analysis of inter-rater agreement utilizing appropriate reliability indicators.

2. Literature review

2.1. Waqf Takaful

The Selangor State Fatwa Committee (2020) asserts that takaful is permissible, as it is founded on the principles of mutual assistance (ta'awun) and voluntary contribution (tabarru'), while remaining devoid of elements that are prohibited in Islam, including riba (interest), gharar (uncertainty), and maysir (gambling) (Bakar et al., 2024). Conversely, the principle of the waqf is to remain untouched, unsold, and untransferable through inheritance. Consequently, the cash waqf fund within a Waqf Takaful framework ought to be allocated to investment vehicles that adhere to Shariah principles. All distributions to participants or the public must stem from the returns generated by investments (Mohamad Abdul Hamid et al., 2016).



Therefore, waqf takaful can be defined as an Islamic cooperative risk-sharing structure in which participants contribute a portion of funds to the waqf and Tabarru' funds as an endowment and protection mechanism. The Tabarru' fund functions as a reservoir for disbursing valid claims of participants; any excess may be allocated for dividend distributions to the participants. Conversely, the waqf fund shall be allocated to Shariah-compliant investment instruments. The ROI will assist in addressing the deficit of the tabarru' fund, as the claims against it have surpassed the total contributions from members. Multiple researchers have conducted studies on waqf takaful (Abdullah et al., 2018; Muhamat et al., 2019; Noorhidayu et al., 2020; Zakaria et al., 2019). The bulk of researchers endeavor to determine ways to include waqf into takaful procedures. The discourse on waqf takaful mostly centers on the creation of a cash waqf fund for takaful products. The unification of Islamic financial and Takaful services in Malaysia under the IFSA 2013 Act aimed to establish a complete Shariah-compliant regulatory framework for Islamic financial operations. The enactment of the IFSA 2013 and FSA 2013 resulted in the repeal and replacement of multiple legislative acts, including the Islamic Banking Act 1983, the Takaful Act 1984, the Payment Systems Act 2003, the Exchange Control Act 1953, the Insurance Act 1996, and the Banking and Financial Institutions Act 1989, with a singular legislative framework. The IFSA 2013 framework is anticipated to enhance the efficient implementation of Takaful business (Islam. Financ. Serv. Act, 2013).

By implementing extensive regulations concerning the enforcement of Sharia non-compliance risk and establishing a legal obligation for Takaful entities to ensure that their objectives, operations, affairs, companies, and activities adhere to Sharia principles (Mohd Zain et al., 2021). The segregation of funds, a singular licensed takaful enterprise, the structure of the business organization, and enhanced fiduciary responsibilities of the Board of Directors (BOD) are among the new stipulations of IFSA 2013 that have become essential components of IFSA's regulatory framework for the takaful sector. Additionally, Sharia governance, an insolvency framework, and consumer rights are integral components of the IFSA 2013 criteria.

2.2. The difference between Insurance, takaful, and waqf takaful

Insurance, takaful, and waqf takaful are risk management tools designed to protect against calculated risks. This risk management tool has the same objective but varies in its operational frameworks, concepts, and foundational philosophies. Understanding the difference between these three financial tools is crucial for understanding the development and advancement within both conventional and Islamic finance contexts (Hassan, 2019). Conventional insurance is a financial instrument that transfers the calculated risk and potential losses to an insurance company, provided that the insured parties contribute to premium payments. The insurance company is required to compensate the insured parties for any covered indemnities after evaluating the risk. Generally, conventional insurance applies *riba* (interest), *gharar* (uncertainty), and *maysir* (gambling) in its operations (Hassan, 2019). Conversely, takaful operations are intended to operate following Shariah law. Takaful protection is predicated on the principles of *ta'awun* and *tabarru'*, which refer to voluntary contribution and mutual assistance. The takaful policyholder contributes to a reservoir of funds that is intended for mutual protection, rather than for profit. The *tabarru'* fund is overseen by the takaful company in the capacity of a fiduciary. They impose a fee for management services, and any surplus funds are returned to the policyholder. Takaful operates by investing in Shariah-compliant investment vehicles, risk sharing, and maintaining transparency, thereby preventing prohibited transactions (Salman & Hassan, 2020). The distinction between takaful and waqf takaful lies in the fact that waqf takaful enhances the standard takaful framework by incorporating the principles of waqf into its structure. Waqf funds are created as distinct entities in which a portion of the policyholder's contribution is designated as a waqf donation. As the waqf fund expands, the principal sum of the waqf donation should be allocated to shariah-compliant investment vehicles, such as an Islamic fixed deposit, ensuring the preservation of the initial fund indefinitely. The return on investment may be allocated to the *tabarru'* fund as assistance if the policyholder excessively claims the fund. This model emphasizes the evolution of sustainable financial instruments from risk-sharing mechanisms to semi-charitable entities that resonate with the principles of waqf, ensuring that the funds serve the interests of policyholders across generations (Haneef et al., 2015).

2.3. Waqf Takaful Industry in Malaysia

Yayasan Waqf YWM has partnered with other takaful companies in Malaysia to expand the variety of endowment plans offered. By including the waqf component in takaful products, participants can elect to contribute to YWM in accordance with the magnitude of their contribution or the quantity of benefits received. Takaful Ikhlas Family Berhad (TIFB) is the inaugural takaful company to partner with YWM via the Ikhlas Waqf Endowment (IWE) program. IWE is a community effort by TIFB (YWM, 2022). All takaful participants from TIFB who commenced contributions in April 2020 are eligible to engage in IWE. The perks of joining IWE include TIFB providing a complimentary sum of one thousand ringgit for each contribution to a general takaful certificate. This clause pertains exclusively to unintentional fatalities of contributors. Contributors may allocate monetary waqf to YWM, limited to a maximum of one-third of the entire takaful certificate benefits following the policyholder's demise (TIFB, 2022). Sun Life Malaysia



Takaful Berhad (SLMT) is the second takaful firm that partnered with YWM. SLMT provides two items featuring waqf riders. The initial product is Sun Infinity-i. SLMT will disburse 5% of the entire contribution to YWM following the demise of the plan participant. This product is also accessible to non-Muslims. SLMT offers the SunLink Istismar Plus product for waqf riders. SLMT will disburse to YWM a maximum of 10% of the rider's payout for Waqf and Death resulting from a personal accident, sourced from the tabarru' fund, upon the event of death (YWM, 2022). AmMetLife Takaful Berhad is the third takaful firm that partnered with YWM. AmMetLife Takaful products, including waqf riders, allow policyholders to choose YWM as a beneficiary of the takaful certificate. The tabarru' allocated from the Participant Investment Fund (PIF) to the Participant Risk Fund (PRF) will be utilized to support participants in the event of accidents (YWM, 2022). Upon deducting the wakalah fee, the contribution is allocated to the PIF. The operator will manage and invest the Sharia-compliant funds. The PIF will retain the investment profits for the advantage of the participants. Provided the participant has neither filed claims nor obtained benefits from any insurance type under this certificate while it remains active, any net surplus in the PRF shall be distributed between participants and the operator according to the established ratio (YWM, 2022). Conversely, the principal objective of waqf takaful is to tackle financial inclusion challenges in Malaysia, hence assisting the B40 demographic.

3. Research Methodology

The methodology employed in this study is a quantitative research design aimed at evaluating expert agreement on the proposed Waqf Takaful model. The main objective of this study is to assess inter-rater reliability using Cohen’s Kappa coefficient statistically, to measure rater agreement between expert evaluations on themes related to this study. The study population comprises experts in Islamic finance, takaful, and waqf, encompassing industry professionals, academics, and relevant stakeholders. A selective sampling method, categorized as nonprobability sampling, was employed to identify two experts tasked with certifying the subject's relevant expertise in the field. For the purpose of assisting experts in carrying out their evaluations, a structured assessment tool was developed. The document analyzed multiple aspects of the proposed waqf takaful model, emphasizing its framework, governance, Shariah compliance, and capacity to improve financial inclusion. Experts were asked to assess their agreement or disagreement with specific assertions related to each issue using a binary scale (agree/disagree). This facilitated the execution of categorical analysis. A summary of the proposed waqf takaful model, the assessment instrument, and the entire set of guiding notes was sent to the expert panel via email. The specialists were granted a week to complete their evaluations. Subsequent to the evaluations' conclusion, the data were prepared for statistical analysis. The data obtained from the expert raters was analyzed using version 26 of the Statistical Package for the Social Sciences (SPSS). The Crosstabs function was used to calculate the Cohen Kappa coefficient, which represents the degree of agreement among raters regarding each thematic element of the proposed waqf takaful model. The standard for interpreting Kappa values was defined by Landis and Koch (1977). Substantial agreement is indicated by values between 0.61 and 0.80, while virtually complete agreement is demonstrated by values exceeding 0.81.

4. Data Analysis, Discussion, and Findings

A cross-tabulation analysis was performed to evaluate the extent of agreement between the two expert raters on five critical themes: Shariah conformity, governance structure, sustainability, efficacy, and operational feasibility. Table 1 illustrates the proportion of respondents who concurred with and opposed these assessments. The two raters concurred on four out of five topics, as evidenced by the observed agreement (PoP_oPo) of 80%. However, the projected agreement by chance (PeP_ePe) was also 80%, resulting in a Cohen's Kappa (κ) value of 0. This outcome implies that, despite the substantial degree of agreement between the two raters, it did not surpass the level that could be predicted by random chance. This may be the consequence of Rater 1 designating an "agree" rating to all five themes, which prevents any discernible variation in the ratings.

TABLE 1: CROSS-TABULATION OF EXPERT RATINGS FOR FIVE THEMES

	Rater 2: Agree	Rater 2: Disagree	Total
RATER 1: AGREE	4	1	5
RATER 1: DISAGREE	0	0	0
TOTAL	4	1	5

Formula applied:



$$K = \frac{P_o - P_e}{1 - P_e}$$

Where:

$$P_o = \frac{(4 + 0)}{5} = 0.80 \text{ (observe agreement)}$$

$$P_e = \frac{[(4 + 1)(4 + 0) + (0 + 0)(1 + 0)]}{5^2} = 0.80 \text{ (expected agreement by chance)}$$

Thus:

$$\kappa = \frac{(0.80 - 0.80)}{(1 - 0.80)} = 0$$

Cohen's Kappa scores of 0 suggest that no agreement can be attributed to coincidence. The raters were in agreement eighty percent of the time, even though this was no more than what would have occurred by coincidence. Rater 1's responses were consistently uniform, which was the primary reason for this. This study's findings underscore a significant methodological issue: despite an 80% agreement rate between the two expert raters, this level of concordance does not surpass what could be anticipated by chance, as evidenced by a Cohen's Kappa value of 0.00. The result was influenced by Rater 1's consistent "agree" rating across all five themes. The lack of diversity reduces the efficacy of Cohen's Kappa in distinguishing between objects, which may result in contradictory conclusions even in the presence of substantial agreement. Most experts have indicated that the proposed Waqf Takaful model is a viable concept, particularly in terms of Shariah compliance, governance, sustainability, operational feasibility, and effectiveness. The methodological outcome underscores the necessity of employing a diverse array of ratings in the application of inter-rater reliability measures such as Cohen's Kappa. The observed trend of agreement reinforces the perceived robustness of the proposed model. This suggests that future research should consider increasing the number of expert raters or utilizing alternative reliability metrics, such as Fleiss' Kappa, to accommodate multiple raters and further strengthen the validity of the agreement analysis.

5. Conclusion

The goal of this study was to find out how much specialists agreed on the proposed Waqf Takaful model by using inter-rater reliability analysis. The results showed that the two expert evaluators agreed with each other to a large extent (80%). The Cohen's Kappa coefficient was 0.00, which means that the level of agreement was lower than what could be predicted by chance. Even though there are numbers, the consistently positive reviews suggest that the proposed Waqf Takaful model gets a lot of support from expert reviewers, especially when it comes to following Shariah principles, having a good governance structure, being sustainable, being effective, and being easy to run. The study shows that the Waqf Takaful model might be possible, but it also shows how important it is to look at inter-rater agreement statistics, especially when the responses from raters don't vary much. To get a better understanding of consensus in multi-rater evaluations, future studies should include more expert raters and look into different statistical measures, such as Fleiss' Kappa.

6. References

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