



A Study on Mosque Imarah Model Through Balanced Scorecard Constructs in Selected Mosques in Kuching, Sarawak

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Abstract

Mosques serve not only as places of worship but also as centres of religious education, community development, social welfare, and public engagement. Their continued effectiveness therefore requires systematic governance, organisational capability, quality services, and meaningful engagement with congregants. This study examines organisational and service-related factors associated with Mosque Imarah by applying an adapted Balanced Scorecard (BSC) perspective to selected mosques in Kuching, Sarawak. Specifically, the main objective of this study is to determine the linear relationship between organisational development (MOD) and workshop comfort (WOC) as predictor variables and mosque effectiveness (MEF) as criterion variable. A quantitative cross-sectional design was employed using a structured bilingual Malay-English questionnaire administered to mosque committee members, officials, volunteers, and congregants. Of 450 questionnaires distributed, 287 were returned and 231 were retained as complete and usable. A pilot study involving 50 respondents was conducted to assess the clarity and reliability of the instrument. Data were analysed using IBM SPSS Statistics through descriptive statistics, reliability analysis, Pearson correlation, multiple regression, and exploratory factor analysis. The findings indicate generally high levels across the three composite constructs. All constructs were positively and significantly correlated, with the strongest relationship between MOD and WOC ($r = 0.828, p < 0.001$). The regression model was statistically significant, $F(2, 228) = 200.852, p < 0.001$, explaining 63.8% of the variance in MEF ($R^2 = 0.638$). Both MOD ($\beta = 0.384, p < 0.001$) and WOC ($\beta = 0.451, p < 0.001$) significantly predicted MEF, with WOC making the stronger contribution. Reliability was excellent (Cronbach's alpha = 0.915), while exploratory factor analysis indicated a strong common structure among the three composite measures. Overall, the study provides empirical support for a Balanced Scorecard-based approach to understanding mosque performance and Mosque Imarah. The findings highlight the importance of systematic management, effective governance, continuous improvement, and congregational-oriented service delivery, with practical implications for mosque committees, Islamic religious authorities, and policymakers.

Keywords: Mosque Imarah; Balanced Scorecard; Organisational Development, Worship Comfort; Mosque Effectiveness; Mosque Performance; Islamic Management; Sarawak.

1.0 Introduction

The mosque occupies a central position in Islamic civilisation as more than a place for ritual worship. Since the establishment of Masjid Quba' and Al-Masjid an-Nabawi, mosques have served as centres of worship, religious education, social welfare, consultation, and community development (Al-Qaradawi, 1997; Omer, 2016). Their effectiveness has therefore depended not only on spiritual leadership but also on sound organisational management and the ability to serve wider community needs (Mohamed et al., 2014). The Holy Qur'an emphasises the importance of maintaining and developing mosques as centres of faith and righteousness. Allah سبحانه وتعالى says:

“The mosques of Allah are only to be maintained by those who believe in Allah and the Last Day, establish prayer, give zakah, and fear none except Allah, for it is they who are expected to be rightly guided.” (Qur'an, Surah At-Tawbah 9:18, *Sahih International*, 1997).

This verse highlights the broader meaning of *Imarah al-Masjid*, which extends beyond physical construction and maintenance to the development of religious, educational, social, and community functions. Islamic scholarship distinguishes between physical development (*Imarah Hissiyyah*) and spiritual and institutional development (*Imarah Ma'nawiyyah*) (Al-Qaradawi, 1997; Omer, 2016). Mosque effectiveness should therefore be assessed not only through facilities but also through governance, services, congregational engagement, and institutional contribution to community well-being. In Malaysia, mosques are supervised by the respective State Islamic Religious Councils and Islamic Religious Departments, while daily administration is undertaken by mosque committees, religious officials, officers, volunteers, and supporting personnel. As community expectations evolve, administrators face increasing demands for transparency, accountability, effective governance, prudent resource management, quality services, and relevant programmes (Mohd Noor et al., 2020; Ismail & Abidin, 2021). These developments require more systematic and evidence-based approaches



to mosque management. Adequate infrastructure alone is insufficient; sustainable performance also depends on leadership, governance, organisational capability, service quality, and relationships with congregants. The Balanced Scorecard (BSC) offers a useful framework for addressing these challenges. Originally developed as a multidimensional performance measurement system, it integrates stakeholder outcomes, internal processes, and learning and growth rather than relying solely on financial indicators (Kaplan & Norton, 1992, 1996). It subsequently evolved into a strategic management framework supporting organisational alignment, continuous improvement, and stakeholder value creation (Kaplan & Norton, 2001; Niven, 2008). Although developed in a business setting, its principles can be adapted to non-profit and religious institutions by placing mission achievement and stakeholder outcomes at the centre of performance management (Niven, 2008). In the mosque context, this perspective links organisational capability, governance, service quality, congregational experience, and institutional outcomes. Continuous learning can strengthen managerial knowledge and competencies, improve decision-making, and support accountability and service delivery (Senge, 2006). Effective governance and quality services may subsequently enhance congregational experiences, participation, and the broader vibrancy of the mosque. Continuous learning is particularly relevant because mosque administrators operate amid changing community expectations and administrative requirements. It can strengthen managerial competencies and problem-solving capabilities (Senge, 2006). Effective governance, encompassing accountability, transparency, integrity, consultation, and responsible decision-making, is similarly essential to public confidence and institutional credibility and is compatible with Islamic principles such as *amanah*, *shura*, *ihsan*, and *islah*. Service quality also shapes mosque performance. Worship comfort may include cleanliness, temperature, acoustics, accessibility, safety, maintenance, and an atmosphere that is welcoming and spiritually conducive. These experiences can influence congregational satisfaction, an important stakeholder outcome in non-profit performance assessment (Kaplan & Norton, 1996; Niven, 2008). Satisfied congregants may be more willing to participate in programmes, support community activities, and maintain engagement, thereby contributing to the broader objective of Mosque Imarah. Despite increasing attention to professional mosque management, empirical research integrating Balanced Scorecard principles with mosque performance in Malaysia remains limited. Previous studies have addressed management, governance, accountability, leadership, community engagement, and performance measurement, but greater understanding is needed of how organisational and service-related dimensions interact within an integrated framework (Mohamed et al., 2014; Mohd Noor et al., 2020).

Accordingly, this study applies an adapted Balanced Scorecard perspective to selected mosques in Kuching, Sarawak, examining the relationships among the principal constructs in the final empirical model viz: Organisational Development (MOD), Worship Comfort (WOC), Mosques Effectiveness (MEF) and their contributions to mosque outcomes. The study contributes theoretically to Islamic management, mosque governance, and performance measurement in a religious non-profit setting. Practically, its findings may assist mosque committees, Islamic religious authorities, and policymakers in developing evidence-based strategies to strengthen governance, services, and community outcomes. Ultimately, the study seeks to support sustainable, accountable, responsive, and community-centred mosques capable of fulfilling their multifaceted responsibilities in contemporary Muslim society.

2.0 Literature Review

2.1 Mosque Imarah

The concept of *Imarah* refers to development, prosperity, construction, and the flourishing of a place. In the Islamic context, Mosque Imarah extends beyond physical maintenance to include religious, educational, social, and community functions. Islamic scholarship distinguishes between *Imarah Hissiyyah* (physical development) and *Imarah Ma'nawiyyah* (spiritual, social, and institutional development) (Al-Qaradawi, 1997; Omer, 2016). Sustainable Mosque Imarah therefore depends on effective governance, capable leadership, continuous improvement, congregational participation, and programmes responsive to community needs.

2.2 Balanced Scorecard and Mosque Management

Kaplan and Norton (1992, 1996) developed the Balanced Scorecard (BSC) as a multidimensional performance framework incorporating stakeholder outcomes, internal processes, and learning and growth alongside financial measures. It subsequently evolved into a strategic management approach emphasising organisational alignment, continuous improvement, and stakeholder value (Kaplan & Norton, 2001; Niven, 2008). Its principles are applicable to non-profit and religious institutions where performance should be assessed through mission achievement, organisational capability, service quality, and stakeholder outcomes rather than financial performance alone. In the mosque context, the BSC provides a useful basis for examining organisational and service-related dimensions of Mosque Imarah. In this study, the framework is adapted to the final empirical constructs represented by MOD, WOC, and MEF.



2.3 Organisational Learning, Governance, and Worship Experience

Continuous learning enables organisations to strengthen knowledge, competencies, adaptability, and decision-making (Senge, 2006). For mosque institutions, it may improve committee capabilities, administration, programme planning, and responsiveness to congregational needs. Governance is similarly central to institutional effectiveness. Transparency, accountability, integrity, consultation, and responsible resource management support organisational credibility and are consistent with Islamic principles such as *amanah*, *shura*, *ihsan*, and *islah*. Worship experience is also important to mosque performance. Worship comfort may include cleanliness, temperature, acoustics, accessibility, safety, maintenance, and a welcoming environment. Such conditions can influence congregational experience, satisfaction, and continued participation. Within a non-profit BSC perspective, stakeholder experience is an important indicator of organisational effectiveness (Kaplan & Norton, 1996; Niven, 2008).

2.4 Research Gap and Conceptual Direction

Although mosque management and governance have received increasing scholarly attention, empirical studies integrating Balanced Scorecard principles into mosque performance in Malaysia remain limited. Previous research has addressed governance, accountability, leadership, community engagement, and performance measurement, but fewer studies have examined these dimensions through an integrated empirical framework (Mohamed et al., 2014; Mohd Noor et al., 2020). This study addresses the gap by applying an adapted BSC perspective to selected mosques in Kuching, Sarawak. The literature provides the basis for examining the relationships among MOD, WOC, and MEF and their contribution to understanding Mosque Imarah. The resulting framework provides the conceptual foundation for the empirical analyses presented in the following sections.

3.0 Research Methodology

This section describes the methodological procedures employed to examine the relationships among the constructs in the proposed Mosque Imarah model. It outlines the research design, study population and sampling approach, research instrument, pilot study, data collection procedures, and methods of data analysis. The methodology was designed to provide a systematic and empirical basis for examining the relationships among the study variables and evaluating the proposed model using data collected from selected mosques in Kuching, Sarawak.

3.1 Research Design and Constructs Measurement

This study employed a quantitative, cross-sectional research design. A quantitative approach was considered appropriate because the study sought to measure respondents' perceptions of the study constructs and statistically examine the relationships among them. Cross-sectional survey designs are widely used in behavioural, management, and organisational research when data are collected from respondents at a single point in time to examine patterns, associations, and predictive relationships among variables (Sekaran & Bougie, 2020; Creswell & Creswell, 2023). The study was guided by an adapted Balanced Scorecard perspective. The framework recognises that organisational performance in a non-profit and religious institution should not be assessed solely through financial indicators. Instead, organisational capability, management and governance processes, service-related outcomes, stakeholder experiences, and broader institutional outcomes should be considered collectively (Kaplan & Norton, 1992, 1996, 2001; Niven, 2008). Within the present study, the proposed model was examined using the composite constructs represented in the final empirical analysis, namely MOD, WOC, and MEF. MOD was measured using a combined construct of continuous learning (8 items) and mosque governance (10 items), WOC (10 items), and MEF was measured with a combination of mosque Imarah construct (8 items) and congregants satisfaction (8 items). All 44 items were anchored using a continuous 5-point Likert scale with "1" as strongly disagree and "5" as strongly agree. While demographic variables were measured using nominal and categorical scale. The research design enabled the study to first describe respondents' perceptions of the constructs and subsequently examine their statistical relationships. Pearson correlation analysis was used to determine the direction and strength of the associations among the variables, while multiple regression analysis was used to assess the extent to which MOD and WOC predicted MEF. Reliability analysis and exploratory factor analysis were also conducted to assess the internal consistency and overall common structure of the composite measures. This combination of analyses provided an appropriate basis for evaluating the empirical relationships proposed in the final model (Pallant, 2020; Tabachnick & Fidell, 2019).



3.2 Population and Sampling

The target population comprised individuals with direct experience of mosque activities and administration in selected mosques in the Petra Jaya, Santubong, and Matang areas of Kuching, Sarawak. The respondents included mosque committee members (AJK), Imams, Bilals, Marbots, mosque officers, volunteers, and general congregants (*Jemaah*). These groups were considered appropriate because they possess direct knowledge and experience relating to mosque programmes, administration, facilities, worship activities, and the overall services provided by the mosque. The study employed a purposive sampling approach. Purposive sampling is appropriate when respondents are selected because they possess relevant knowledge, experience, or involvement in the phenomenon under investigation (Sekaran & Bougie, 2020; Creswell & Creswell, 2023). In this study, participation was therefore directed towards individuals who were involved with or regularly attended the selected mosques and were consequently able to provide informed responses regarding the organisational and service-related aspects measured in the questionnaire. Krejcie and Morgan's sample size guideline was used as a general reference during the planning stage, with a recommended sample size of 384 respondents. To accommodate possible non-response and incomplete questionnaires, a total of 450 questionnaires were distributed. Of these, 287 questionnaires were returned, producing an overall return rate of 63.8%. Following data screening and cleaning, 231 questionnaires were retained as complete and usable for the final statistical analyses. The usable sample represented 80.5% of the returned questionnaires and 51.3% of all questionnaires distributed. Although the final usable sample was below the initial target of 384 respondents, the 231 valid responses provided the empirical dataset for the analyses reported in this study. The final sample size was sufficient for the descriptive, correlation, regression, reliability, and exploratory factor analyses undertaken, subject to the assumptions and limitations of each statistical procedure (Hair et al., 2019; Pallant, 2020). The findings should nevertheless be interpreted within the geographical and sampling scope of the study.

3.3 Research Instrument

Data were collected using a structured bilingual questionnaire in Malay and English. The bilingual format was adopted to facilitate respondents' understanding and to ensure that the questionnaire was accessible to participants with different language preferences. The questionnaire consisted of demographic questions and measurement items relating to the principal constructs of the study. The questionnaire was organised into sections covering the respondents' background and perceptions of the relevant organisational and mosque-related dimensions. The demographic section collected information on characteristics such as respondent category, gender, age, participation in mosque programmes, attendance at relevant training, years of involvement with the mosque, and frequency of prayer at the mosque. These data were used to describe the profile of the respondents. The subsequent sections contained statements designed to measure the study constructs represented in the final empirical model. Responses were recorded using a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree. Likert-type scales are widely used in social science and management research to measure attitudes, perceptions, and levels of agreement in a structured and standardised manner (Sekaran & Bougie, 2020). The measurement items were adapted and refined from relevant literature and established concepts relating to organisational management, governance, service experience, stakeholder outcomes, and mosque performance. The wording of the items was contextualised to ensure their relevance to the mosque environment and the objectives of the present study. The use of composite mean scores enabled the study constructs to be represented as aggregate measures for the subsequent descriptive and inferential analyses.

3.4 Pilot Study

Prior to the main survey, a pilot study involving 50 respondents was conducted to assess the clarity, suitability, and internal consistency of the questionnaire. Pilot testing is an important stage in survey research because it enables researchers to identify ambiguous wording, assess respondents' understanding of the items, and evaluate the preliminary reliability of the measurement scales before proceeding with the main data collection (Sekaran & Bougie, 2020). The pilot data were examined using reliability analysis based on Cronbach's alpha. Cronbach's alpha is a commonly used measure of internal consistency, indicating the extent to which items within a scale are sufficiently related to measure the same underlying construct (Nunnally & Bernstein, 1994; Pallant, 2020). The pilot results indicated satisfactory reliability for the measurement instrument, supporting its suitability for use in the main survey. Following the pilot study, the questionnaire was reviewed and refined where necessary to improve clarity, consistency, and contextual suitability. The final version of the instrument was subsequently used for the main data collection involving respondents from the selected mosques.

3.5 Data Collection Procedure and Screening

Data collection was undertaken through the distribution of questionnaires to eligible respondents associated with the selected mosques in Kuching, Sarawak. Participation included respondents from different categories, including mosque



committee members, mosque officials, and general congregants. Respondents were informed of the purpose of the study and were requested to provide their responses based on their own experiences and perceptions of the mosque. A total of 450 questionnaires were distributed during the data collection process. Upon completion of the survey period, 287 questionnaires were returned. The returned questionnaires were then screened before statistical analysis. Data screening involved checking the questionnaires for completeness, consistency, and usability. Questionnaires containing substantial missing responses or otherwise unsuitable data were excluded from the final analysis. Following this screening and cleaning process, 231 questionnaires were retained as valid and usable. The final dataset was coded and entered into IBM SPSS Statistics for analysis. The screening process was important to ensure that the statistical analyses were based on complete and sufficiently reliable responses and that the final dataset accurately represented the usable information obtained from the survey (Pallant, 2020; Tabachnick & Fidell, 2019).

3.6 Data Analysis

The collected data were analysed using IBM SPSS Statistics. Both descriptive and inferential statistical techniques were employed to address the objectives of the study and examine the relationships among the constructs in the final empirical model. Statistical significance was evaluated at the conventional 0.05 probability level, while results reported by SPSS as .000 were interpreted and reported as $p < .001$.

The analysis proceeded in several stages.

3.6.1 Descriptive Statistics

Descriptive statistics were first used to summarise the characteristics of the respondents and the overall distribution of the study variables. Frequencies and percentages were used to describe demographic and mosque-related characteristics. For the composite constructs, the minimum, maximum, mean, and standard deviation were examined to determine the overall level and dispersion of respondents' perceptions.

3.6.2 Reliability Analysis

Internal consistency reliability was assessed using Cronbach's alpha. The analysis examined the overall reliability of the composite measures, together with corrected item-total correlations, squared multiple correlations, and Cronbach's alpha if an item was deleted. Reliability analysis was used to determine whether the measures demonstrated an acceptable degree of internal consistency for subsequent statistical analysis (Nunnally & Bernstein, 1994; Pallant, 2020).

3.6.3 Pearson Correlation Analysis

Pearson product-moment correlation analysis was conducted to examine the direction, strength, and statistical significance of the relationships among MOD, WOC, and MEF. The correlation coefficient, r , indicates the degree and direction of the linear association between two variables. The analysis was used to provide preliminary evidence of the relationships among the study constructs before the regression analysis was conducted (Pallant, 2020; Tabachnick & Fidell, 2019).

3.6.4 Multiple Regression Analysis

Multiple regression analysis was conducted to examine the predictive contribution of MOD and WOC to MEF. In the regression model, MEF was specified as the dependent variable, while MOD and WOC were entered as the independent or predictor variables.

The regression analysis examined the multiple correlation coefficient (R), coefficient of determination (R^2), adjusted R^2 , standard error of the estimate, overall F -statistic, unstandardised regression coefficients (B), standardised regression coefficients (β), t -values, and significance levels. The R^2 value indicated the proportion of variance in MEF jointly explained by MOD and WOC, while the standardised beta coefficients enabled comparison of the relative predictive contribution of the two independent variables (Hair et al., 2019; Pallant, 2020).

3.6.5 Exploratory Factor Analysis

An Exploratory Factor Analysis (EFA) using Principal Axis Factoring was conducted to examine the overall common structure among the three composite variables. The suitability of the data for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. Communalities, eigenvalues, and the proportion of variance explained by the extracted factor were subsequently examined. Because this analysis was conducted using three composite mean variables rather than the individual questionnaire items, the EFA was interpreted as an assessment of their overall common structure rather than as a full validation of the measurement scales. A more comprehensive assessment of construct validity would require factor analysis at the individual-item level (Hair et al., 2019; Tabachnick & Fidell, 2019).

3.7 Ethical Considerations

The study was conducted with due regard for voluntary participation, confidentiality, and responsible handling of respondents' information. Participation in the survey was based on the respondents' willingness to provide information



relating to their experiences and perceptions. The questionnaire was used for academic and research purposes, and the findings were reported in aggregate form without identifying individual respondents. The study also sought to ensure respectful engagement with the mosque community and sensitivity to the religious and institutional context in which the research was undertaken. The collection, analysis, and presentation of data were guided by the principles of research integrity, accuracy, and responsible reporting.

3.8 Summary of Research Methodology

In summary, this study adopted a quantitative, cross-sectional survey design to examine the organisational and service-related factors associated with Mosque Imarah in selected mosques in Kuching, Sarawak. A structured bilingual questionnaire was used to collect data from mosque committee members, officials, volunteers, and congregants. The study employed purposive sampling, with 450 questionnaires distributed, 287 returned, and 231 retained as complete and usable for the final analysis. The questionnaire was subjected to pilot testing involving 50 respondents before the main survey, and its suitability was assessed through reliability analysis. The final data were analysed using IBM SPSS Statistics through descriptive statistics, reliability analysis, Pearson correlation, multiple regression, and exploratory factor analysis. These procedures provided the empirical basis for examining the relationships among MOD, WOC, and MEF and for evaluating the final proposed model. The methodological procedures described in this section provide the foundation for the presentation and interpretation of the empirical findings in the next section.

4.0 Results and Discussion

This section presents the empirical findings from 231 valid respondents. The analysis proceeded through respondent profiling, preliminary data assessment, factorability and exploratory factor analysis, reliability assessment, formation of the final three-construct structure, descriptive statistics, correlation analysis, multiple regression, hypothesis testing, and a summary of the findings.

4.1 Respondent Profile

The respondents comprised mosque committee members and officials, including AJK, Imams, Bilals and Marbots, as well as general congregants (*Jemaah*). General congregants constituted the largest group (79.7%), followed by AJK (15.6%). The sample was predominantly male (71.9%), while females represented 28.1%. The largest age group was 60 years and above (33.3%), followed by those aged 50–59 years (19.0%), 40–49 years (17.7%), 18–29 years (15.6%) and 30–39 years (14.3%). Most respondents (87.4%) had attended at least one mosque programme, with religious talks being the most frequently reported activity (46.8%). Only 26.0% had attended formal training related to mosque committee or official responsibilities, while 74.0% had not. This finding highlights a potential need for greater emphasis on structured training and capability development among those involved in mosque administration. Regarding prayer frequency, 30.3% reported attending the mosque more than 14 times, indicating substantial engagement with mosque activities. Overall, the respondent profile represents a predominantly male, older and congregation-based sample with relatively high participation in mosque programmes but comparatively limited formal management training.

4.2 Data Screening and Preliminary Analysis

A total of 450 questionnaires were distributed. Of these, 287 questionnaires were returned, representing a return rate of 63.8%. Following screening for completeness and consistency, 231 questionnaires were retained as valid and usable, representing 51.3% of the total distributed and 80.5% of the returned questionnaires.

4.1.1 Table 4.1 Response Rate

Stage	Number (n)	Percentage (%)
Required sample size (Krejcie & Morgan)	384	—
Questionnaires distributed	450	100.0
Questionnaires returned	287	63.8
Complete and usable questionnaires	231	51.3
Incomplete/unusable questionnaires	56	12.4

The final sample was below the 384 respondents suggested by Krejcie and Morgan. Nevertheless, the 231 valid responses provided sufficient data for the preliminary analyses conducted in this study. The data were screened for missing responses and consistency before the main statistical analyses were undertaken.

4.3 KMO and Bartlett's Test

The suitability of the three composite variables for exploratory factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity.



The KMO value of 0.752 indicated acceptable sampling adequacy. Bartlett's Test was statistically significant, $\chi^2(3) = 495.354$, $p < 0.001$, demonstrating that the correlation matrix was not an identity matrix and that sufficient interrelationships existed among the variables for factor analysis.

Table 4.2 KMO and Bartlett's Test

Test	Value
Kaiser-Meyer-Olkin Measure	0.752
Bartlett's Approx. Chi-Square	495.354
df	3
Sig.	< 0.001

These results confirmed the suitability of the data for exploratory factor analysis.

4.4 Exploratory Factor Analysis

Exploratory Factor Analysis using Principal Axis Factoring was conducted on the three composite variables representing the proposed final model. The analysis showed a dominant single-factor structure.

The first factor had an initial eigenvalue of 2.570, explaining 85.662% of the total variance. After extraction, the factor explained 79.012% of the variance. The remaining factors had eigenvalues below 1.00 and were not retained. The extracted communalities ranged from .744 to .833, indicating that all three variables were adequately represented by the extracted factor.

4.1.2 Table 4.3 EFA Summary

Variable	Extracted Communality		
Organisational Development (MOD)			0.822
Worship Comfort (WOC)			0.833
Mosque Effectiveness (MEF)			0.744
Factor	Eigenvalue	Initial Variance (%)	Extracted Variance (%)
1	2.570	85.662	79.012

The EFA therefore indicated a strong common structure among the three composite constructs. However, because the analysis was conducted using composite mean variables rather than individual measurement items, the findings should be interpreted as evidence of an overall common structure rather than a full assessment of individual-item construct validity (Hair et al., 2019; Tabachnick & Fidell, 2019).

4.5 Reliability Analysis

Internal consistency was assessed using Cronbach's alpha for the three composite measures. The overall reliability coefficient was $\alpha = 0.915$, indicating excellent internal consistency (Nunnally & Bernstein, 1994). The corrected item-total correlations ranged from 0.798 to 0.853, substantially exceeding the commonly recommended minimum of 0.30. In addition, the Cronbach's alpha value would decrease if any of the three measures were removed, confirming that all constructs contributed meaningfully to the overall measurement structure.

4.1.3 Table 4.4 Reliability Analysis

Construct	Corrected Correlation	Item-Total	Alpha if Deleted
Organisational Development (MOD)		0.844	0.868
Worship Comfort (WOC)		0.853	0.858
Mosque Effectiveness (MEF)		0.798	0.905

Overall Cronbach's Alpha = 0.915



The results demonstrate excellent consistency among the three composite constructs. Accordingly, all three were retained for subsequent analysis.

4.6 Formation of the Final Three-Construct Measurement Structure

Based on the exploratory factor analysis, reliability results and theoretical alignment with the Balanced Scorecard framework, the original study variables were consolidated into three higher-level constructs.

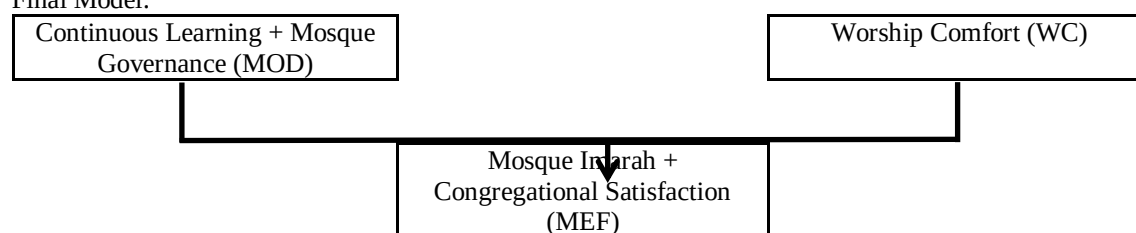
The final structure comprised:

- Organisational Development: Continuous Learning + Mosque Governance (MOD)
- Worship Comfort: Worship Comfort (WOC)
- Mosque Effectiveness: Mosque Ibadah + Congregational Satisfaction (MEF)

The consolidation reflects the conceptual logic that organisational capability and governance collectively form an institutional development dimension, while Mosque Ibadah and Congregational Satisfaction jointly represent broader mosque effectiveness outcomes.

Thus, the final empirical model examined the effects of Organisational Development and Worship Comfort on Mosque Effectiveness.

Final Model:



4.7 Descriptive Statistics

Descriptive statistics were calculated for the three final constructs. All constructs recorded high mean scores, indicating generally positive respondent perceptions.

4.1.4 Table 4.5 Descriptive Statistics

Construct	N	Minimum	Maximum	Mean	Std. Deviation
Organisational Development	231	1.00	5.00	4.3304	0.72709
Worship Comfort	231	1.00	5.00	4.4628	0.69030
Mosque Effectiveness	231	1.00	5.00	4.4635	0.64327

Mosque Effectiveness recorded the highest mean ($M = 4.4635$, $SD = 0.64327$), closely followed by Worship Comfort ($M = 4.4628$, $SD = 0.69030$). Organisational Development recorded a slightly lower but still high mean ($M = 4.3304$, $SD = 0.72709$).

The standard deviations ranged from 0.64327 to 0.72709, suggesting relatively consistent responses. Overall, respondents expressed high levels of agreement across all three dimensions.

4.8 Correlation Analysis

Pearson correlation analysis was conducted to examine the relationships among the three constructs. All relationships were positive and statistically significant at $p < 0.001$.

4.1.5 Table 4.6 Pearson Correlation Matrix

Variables	OD	WC	ME
Organisational Development	1	0.828**	0.757**
Worship Comfort	0.828**	1	0.769**
Mosque Effectiveness	0.757**	0.769**	1

Note: $p < 0.01$ (2-tailed); actual significance $p < 0.001$.



The strongest correlation was between Organisational Development and Worship Comfort ($r = 0.828$, $p < 0.001$). Organisational Development was also strongly related to Mosque Effectiveness ($r = 0.757$, $p < 0.001$), while Worship Comfort showed a strong positive relationship with Mosque Effectiveness ($r = 0.769$, $p < 0.001$). These findings provide preliminary support for the proposed relationships, although correlation should not be interpreted as evidence of causation.

4.9 Multiple Regression Analysis

Multiple regression analysis was conducted with Mosque Effectiveness (ME) as the dependent variable. Organisational Development (OD) and Worship Comfort (WC) were entered as predictor variables.

4.9.1 Model Summary

The regression model produced a multiple correlation coefficient of $R = .799$ and explained 63.8% of the variance in Mosque Effectiveness ($R^2 = .638$). The adjusted R^2 was .635, indicating that the model retained substantial explanatory power after adjustment for the two predictors.

4.9.1 Table 4.7 Model Summary

R	R^2	Adjusted R^2	Std. Error
0.799	0.638	0.635	0.38876

4.9.2 ANOVA Analysis

The overall regression model was statistically significant, $F(2, 228) = 200.852$, $p < 0.001$, confirming that the predictors jointly made a significant contribution to explaining Mosque Effectiveness.

4.9.2 Table 4.8 ANOVA

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	60.713	2	30.356	200.852	< 0.001
Residual	34.460	228	0.151		
Total	95.172	230			

4.9.3 Regression Coefficients

Both predictors made significant positive contributions to Mosque Effectiveness.

4.9.3 Table 4.9 Regression Coefficients

Predictor	B	Std. Error	β	t	Sig.
Constant	1.116	.170	—	6.564	< 0.001
Organisational Development	0.340	0.063	0.384	5.407	< 0.001
Worship Comfort	0.421	0.066	0.451	6.357	< 0.001

Organisational Development significantly predicted Mosque Effectiveness ($\beta = 0.384$, $p < 0.001$). Worship Comfort was also a significant positive predictor ($\beta = 0.451$, $p < 0.001$) and demonstrated the stronger relative contribution.

The estimated regression equation was:

$$MEF = 1.116 + 0.340 (MOD) + 0.421 (WOC)$$

These findings indicate that improvements in both organisational development and worship comfort are associated with higher levels of mosque effectiveness. Together, the two predictors explained 63.8% of the variation in Mosque Effectiveness.

4.10 Hypothesis Testing

The final three-construct model generated two direct hypotheses.

H1: Organisational Development positively influences Mosque Effectiveness

Organisational Development significantly and positively predicted Mosque Effectiveness ($\beta = 0.384$, $t = 5.407$, $p < 0.001$). Therefore, H1 was supported.



H2: Worship Comfort positively influences Mosque Effectiveness

Worship Comfort significantly and positively predicted Mosque Effectiveness ($\beta = 0.451$, $t = 6.357$, $p < 0.001$). Therefore, H2 was supported.

4.10.1 Table 4.10 Hypothesis Testing Summary

Hypothesis	Relationship	β	t	p-value	Decision
H1	OD $\rightarrow$ ME	0.384	5.407	< 0.001	Supported
H2	WC $\rightarrow$ ME	0.451	6.357	< 0.001	Supported

The results confirm that both Organisational Development and Worship Comfort are significant determinants of Mosque Effectiveness. Worship Comfort demonstrated the stronger standardized effect.

4.11 Summary of Findings

The findings demonstrate strong and statistically significant relationships among the final three constructs. First, respondents reported high perceptions of Organisational Development, Worship Comfort and Mosque Effectiveness. Second, all three constructs were strongly and positively correlated, with the strongest relationship observed between Organisational Development and Worship Comfort ($r = 0.828$, $p < 0.001$). Third, the EFA and reliability analyses supported the consolidation of the original variables into a coherent three-construct measurement structure. The KMO value (0.752), significant Bartlett's Test, high extracted variance (79.012%) and excellent reliability ($\alpha = 0.915$) provided support for the suitability of the final structure. Finally, multiple regression analysis showed that Organisational Development and Worship Comfort jointly explained 63.8% of the variance in Mosque Effectiveness. Both predictors were significant, with Worship Comfort ($\beta = 0.451$) exerting a stronger influence than Organisational Development ($\beta = 0.384$). Overall, the results support a simplified and empirically grounded model in which Organisational Development and Worship Comfort jointly contribute to Mosque Effectiveness.

5.0 Conclusion, Implications and Recommendations

5.1 Discussion

The findings demonstrate that Mosque Effectiveness, represented by the combined dimensions of Mosque Ibadah and Congregational Satisfaction, is positively associated with both Organisational Development and Worship Comfort. The results support the fundamental proposition of the adapted Balanced Scorecard framework that internal organisational capability and service quality contribute to improved stakeholder and institutional outcomes (Kaplan & Norton, 1992, 1996, 2001; Niven, 2008). The positive effect of Organisational Development ($\beta = .384$) indicates that the combined role of Continuous Learning and Mosque Governance is important in strengthening Mosque Effectiveness. This finding is consistent with the learning and growth perspective of the Balanced Scorecard, which emphasises that organisational capabilities provide a foundation for improving internal processes and achieving desired outcomes (Kaplan & Norton, 2001). In the mosque context, continuous training, knowledge development, effective leadership and sound governance can strengthen accountability, decision-making and institutional performance. Worship Comfort emerged as the stronger predictor of Mosque Effectiveness ($\beta = .451$). This suggests that respondents place considerable importance on the overall quality of the worship environment. Comfort extends beyond physical facilities to include cleanliness, accessibility, safety, orderliness and the general experience of worshippers. A comfortable and well-managed environment may encourage greater participation and strengthen congregational satisfaction, thereby contributing to Mosque Ibadah. The strong correlation between Organisational Development and Worship Comfort ($r = .828$) also suggests that these dimensions are closely connected. Effective governance and organisational capability are likely to facilitate the provision and maintenance of a quality worship environment. Therefore, mosque effectiveness should not be viewed solely as the outcome of physical development or religious programming. Instead, it reflects the combined influence of organisational capacity and the quality of services experienced by the congregation. The overall model explained 63.8% of the variance in Mosque Effectiveness, demonstrating substantial explanatory power. Nevertheless, the remaining variance indicates that other factors, including leadership style, financial resources, programme diversity, community participation and external institutional support, may also influence mosque outcomes.

5.2 Conclusion

This study developed and tested a simplified three-construct model of Mosque Effectiveness based on selected Balanced Scorecard principles. The final model demonstrated that Organisational Development and Worship Comfort are significant positive predictors of Mosque Effectiveness. The findings indicate that sustainable Mosque Ibadah and Congregational Satisfaction require more than adequate physical facilities. Effective mosque institutions should invest in the continuous development of their people and governance systems while ensuring that worshippers experience a clean, safe, accessible and comfortable environment. The study therefore supports the application of an adapted Balanced Scorecard perspective to mosque management. By integrating organisational development with worship comfort and stakeholder outcomes, mosque committees may adopt a more systematic approach to monitoring and improving institutional performance.



5.3 Theoretical Implications

The study contributes to Islamic management and non-profit governance literature by adapting the Balanced Scorecard framework to the mosque context. Rather than treating Continuous Learning, Mosque Governance, Worship Comfort, Congregational Satisfaction and Mosque Imarah as completely separate dimensions, the findings support their consolidation into a more parsimonious three-construct structure. The resulting framework demonstrates how organisational capability and governance may be integrated as Organisational Development, while Mosque Imarah and Congregational Satisfaction may jointly represent broader Mosque Effectiveness outcomes. This simplified structure offers a practical basis for future research on performance measurement and sustainable mosque development. The findings also extend Balanced Scorecard principles into a religious non-profit setting by emphasising that institutional success can be evaluated through stakeholder and community outcomes rather than financial performance alone (Kaplan & Norton, 1992, 1996; Niven, 2008).

5.4 Practical Implications and Recommendations

Several practical recommendations arise from the findings.

First, mosque committees should strengthen continuous training and organisational development. Formal programmes in governance, leadership, financial management, communication and community engagement may improve institutional capability and accountability. Second, governance practices should be standardised and strengthened. Mosque committees should adopt clearer procedures, defined responsibilities, transparent financial practices and regular performance reviews. These measures may enhance public confidence and institutional effectiveness. Third, greater attention should be given to worship comfort. Mosque management should maintain high standards of cleanliness, safety, ventilation, accessibility and facilities for elderly persons and persons with disabilities. The physical and social environment should be welcoming and inclusive. Fourth, mosque authorities may develop a simple performance monitoring framework based on the three constructs of Organisational Development, Worship Comfort and Mosque Effectiveness. Such a framework could assist mosque committees and Islamic authorities in identifying strengths and areas requiring improvement.

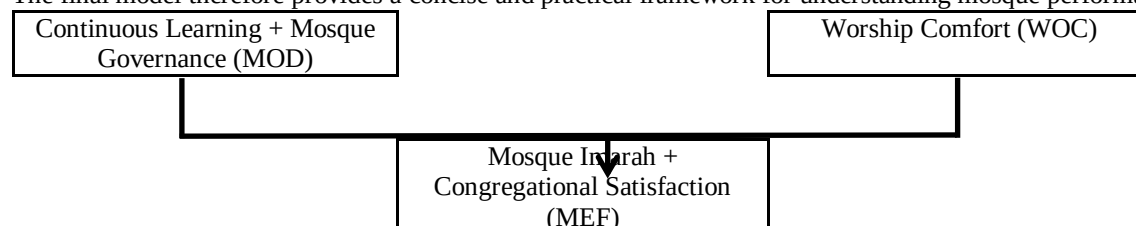
5.5 Limitations and Future Research

Several limitations should be considered. First, the study was cross-sectional and therefore identifies statistical relationships rather than establishing causality. Longitudinal studies could examine whether improvements in organisational development and worship comfort produce sustained changes in mosque effectiveness. Second, the study was limited to selected mosques in the Kuching area. The findings should therefore be generalised cautiously. Future studies should include mosques across different districts and states in Sarawak and Peninsular Malaysia. Third, the final sample of 231 respondents was below the Krejcie and Morgan suggested sample size of 384. Future research should obtain larger and more geographically diverse samples. Fourth, the study relied on self-reported questionnaire data. Future research could use mixed methods by combining quantitative surveys with interviews, focus groups and direct observation to obtain a deeper understanding of mosque management practices and community expectations. Future studies may also examine additional determinants of Mosque Effectiveness, such as leadership, financial sustainability, digitalisation, volunteer participation, programme quality and community partnerships. Confirmatory factor analysis and Structural Equation Modelling could further validate and extend the proposed three-construct framework.

5.6 Final Conclusion

The study concludes that Mosque Effectiveness is strengthened by both Organisational Development and Worship Comfort. While Organisational Development provides the institutional foundation through continuous learning and effective governance, Worship Comfort represents the quality of the environment and services experienced by congregants. Of the two predictors, Worship Comfort demonstrated the stronger effect on Mosque Effectiveness. However, the strong relationship between Organisational Development and Worship Comfort indicates that these dimensions should be developed together.

The final model therefore provides a concise and practical framework for understanding mosque performance:



This framework offers a foundation for evidence-based mosque management and may assist mosque committees, Islamic authorities and policymakers in developing more sustainable, accountable and community-centred mosque institutions.



References

- Abu Bakar, M. (2018). *Mosque management and community development in Malaysia*. Penerbit Universiti Malaya.
- Ahmad, K., & Fontaine, R. (2011). Islamic leadership at the International Islamic University Malaysia. *International Journal of Economics, Management and Accounting*, 19(2), 121–135.
- Al-Qaradawi, Y. (1997). *The role of the mosque in Islam*. Islamic Book Trust.
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). Sage Publications.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (4th ed.). John Wiley & Sons.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage Publications.
- Ismail, M. A., & Abidin, Z. Z. (2021). Mosque governance and accountability: Challenges and best practices in Malaysian mosque administration. *Journal of Islamic Management Studies*, 3(1), 45–60.
- Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard—Measures that drive performance. *Harvard Business Review*, 70(1), 71–79.
- Kaplan, R. S., & Norton, D. P. (1996). *The Balanced Scorecard: Translating strategy into action*. Harvard Business School Press.
- Kaplan, R. S., & Norton, D. P. (2001). *The strategy-focused organization: How Balanced Scorecard companies thrive in the new business environment*. Harvard Business School Press.
- Mohamed, I. S., Aziz, N. A., & Masrek, M. N. (2014). Mosque performance measurement: A conceptual framework using the Balanced Scorecard approach. *International Journal of Management Studies*, 21(Special Issue), 1–18.
- Mohd Noor, N. A., Ahmad, N. H., & Haron, H. (2020). Governance practices and organisational effectiveness of mosques in Malaysia. *Journal of Islamic Accounting and Business Research*, 11(8), 1667–1684.
- Niven, P. R. (2008). *Balanced Scorecard: Step-by-step for government and nonprofit agencies* (2nd ed.). John Wiley & Sons.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Omer, S. (2016). *The Prophet's Mosque as the centre of Islamic civilisation*. Kube Publishing.
- Pallant, J. (2020). *SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS* (7th ed.). McGraw-Hill Education.
- Qur'an. (1997). *The Qur'an: Arabic text with corresponding English meanings* (Sahih International, Trans.). Abul-Qasim Publishing House.
- Sekaran, U., & Bougie, R. (2020). *Research methods for business: A skill-building approach* (8th ed.). Wiley.
- Senge, P. M. (2006). *The fifth discipline: The art and practice of the learning organization* (Rev. ed.). Doubleday.
- Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). Pearson.
- Yusof, M., & Mohd Noor, N. (2020). Mosque governance and community engagement in Malaysia. *Journal of Islamic Management Studies*, 5(2), 45–60.