

LEGITIMACY OF WAQF MANAGEMENT
TECHNOLOGY AND SOCIAL-BUSINESS
INTEGRATION IN MUHAMMADIYAH
ORGANISATION

BY

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A thesis submitted in fulfillment of the requirement for the
degree of Doctor of Philosophy of Islamic Banking and
Finance

IIUM Institute of Islamic Banking and Finance
International Islamic University Malaysia

DECEMBER 2025

ABSTRACT

Waqf plays a strategic role in supporting social welfare, education, and economic empowerment in Indonesia. According to the Indonesian Waqf Board (BWI), in 2022, the potential for cash waqf in Indonesia will reach IDR 2,000 trillion annually. However, the actual waqf collection remains significantly below this potential, with total receipts of approximately IDR 400 billion annually. Muhammadiyah, one of Indonesia's largest Islamic organisations, has significantly contributed to waqf management since its establishment in 1912. As of 2022, Muhammadiyah manages approximately 21,000 hectares of waqf land and various fixed assets. Despite this extensive involvement, the optimisation of waqf management continues to face multiple challenges. Digital transformation is increasingly recognised as a potential solution to enhance waqf management's efficiency, transparency, and sustainability. The technology adoption within Muhammadiyah's waqf management system remains limited, necessitating further study to assess its effectiveness and compliance with shariah principles. The study addressed three objectives: to assess the adequacy of Muhammadiyah's waqf framework, identify key factors shaping the digital waqf model, and analyse performance factors to enhance the sustainability and effectiveness of waqf management. Employing a mixed-methods approach, this research began with an analysis of Muhammadiyah's waqf framework, policies, and operational mechanisms, followed by the development of a digital waqf management model and an assessment of factors influencing technology adoption and the performance of digital waqf systems. The study incorporated qualitative analysis through in-depth interviews, focus group discussions (FGDs), and document reviews with waqf administrators and technology experts. Furthermore, quantitative validation was conducted through a survey of 81 respondents, which required PLS-SEM analysis. This study is grounded in multiple theoretical perspectives. Non-Profit Organisation Theory, Stakeholder Theory, and Sharia Governance explain the governance dimension; Technology Acceptance Model (TAM), Technology Adoption Theory, and Diffusion of Innovation frame the technological adoption process; Legitimacy Theory clarifies societal acceptance; and Social Business Integration Theory supports the integration of waqf with sustainable socio-business practices. The findings indicate that Muhammadiyah possesses substantial readiness for adopting technology in waqf management, with a decentralised management system that remains under centralised administration and oversight. However, digital transformation implementation encounters significant system challenges. To address these issues, this study assessed the Digital Social Business Waqf Muhammadiyah (DSB-WM) model, which integrates technology with social business mechanisms and financial sustainability. The model incorporates investment in Cash Waqf Linked Sukuk (CWLS) and Cash Waqf Linked Deposits (CWLD), crowdfunding platforms, and the productive waqf management of Muhammadiyah's social enterprises (Amal Usaha Muhammadiyah). This model's effectiveness is supported by three key elements: waqf literacy, training and capacity building, and strategic collaboration with academics and Islamic finance practitioners. The quantitative analysis confirms that Perceived Behavioural Control (PBC), Subjective Norms (SN), Perceived Usefulness (PU), and Technological Legitimacy (TL) significantly influence technology adoption in digital waqf management. To enhance the sustainability of digital waqf management, Muhammadiyah must strengthen institutional coordination, increase investment in digital infrastructure, and implement

a structured and continuous digital literacy program. These strategic initiatives are expected to facilitate the broader adoption of technology-driven waqf management systems, thereby improving efficiency, transparency, and long-term social and economic impact in the digital era. The study contributes theoretically by extending Legitimacy and Social Business Integration theories into Islamic social finance, and practically by proposing the Digital Social Business Waqf Muhammadiyah (DSB-WM) model as an innovative framework for strengthening digital readiness, shariah legitimacy, and socio-business integration.



ملخص البحث

يؤدي الوقف دورًا استراتيجيًا في دعم الرفاه الاجتماعي والتعليم والتمكين الاقتصادي في إندونيسيا. وفقًا للهيئة الإندونيسية للوقف (BWI)، فإن إمكانيات الوقف النقدي في إندونيسيا تصل إلى 2000 تريليون روبية إندونيسية سنويًا بحلول عام 2022. ومع ذلك، لا تزال جمعيات الوقف الفعلية أقل بكثير من هذا الإمكان، حيث بلغ إجمالي الإيرادات حوالي 400 مليار روبية سنويًا فقط. تُعد "المحمدية"، كواحدة من أكبر المنظمات الإسلامية في إندونيسيا، مساهمًا رئيسيًا في إدارة الوقف منذ تأسيسها عام 1912. وبحلول عام 2022، تدير "المحمدية" حوالي 21,000 هكتار من الأراضي الوقفية إلى جانب مختلف الأصول الثابتة. وعلى الرغم من هذا الانخراط الواسع، لا تزال إدارة الوقف تواجه تحديات عديدة تحول دون تحقيق أمثل استخدام لها. ويُنظر بشكل متزايد إلى التحول الرقمي كحل محتمل لتعزيز كفاءة وشفافية واستخدام إدارة الوقف. ومع ذلك، فإن تبني التكنولوجيا في نظام إدارة الوقف لدى "المحمدية" لا يزال محدودًا، مما يستدعي مزيدًا من الدراسة لتقييم فعاليته وتوافقه مع مبادئ الشريعة الإسلامية. يهدف هذا البحث إلى تحليل شرعية تبني التكنولوجيا في إدارة الوقف لدى "المحمدية" وتقييم نموذج إدارة الوقف الرقمي الذي يدمج بين الأبعاد الاجتماعية والتجارية. ومن خلال اتباع منهج البحث المختلط، يبدأ هذا البحث بتحليل إطار الوقف لدى "المحمدية"، وسياساته، وآلياته التشغيلية، يليه تطوير نموذج لإدارة الوقف الرقمي وتقييم العوامل المؤثرة في تبني التكنولوجيا وأداء أنظمة الوقف الرقمية. يتضمن البحث تحليلًا نوعيًا عبر المقابلات المعمقة، ومجموعات النقاش المركزة (FGDs)، ومراجعة الوثائق مع مديري الوقف والخبراء التقنيين. علاوة على ذلك، تم إجراء التحقق الكمي من خلال مسح شمل 81 مستجيبًا، والذي تطلب تحليله باستخدام نموذج المعادلات الهيكلية بطريقة (PLS-SEM) تشير النتائج إلى أن "المحمدية" تمتلك استعدادًا كبيرًا لاعتماد التكنولوجيا في إدارة الوقف، مع وجود نظام إداري لامركزي يخضع لإدارة وإشراف مركزيين. ومع ذلك، يواجه تنفيذ التحول الرقمي تحديات نظامية كبيرة. ولمعالجة هذه

المشكلات، قام هذا البحث بتقييم نموذج "الوقف الاجتماعي الرقمي للأعمال - المحمدية" (DSB-WM)، الذي يدمج بين التكنولوجيا وآليات الأعمال الاجتماعية والاستدامة المالية. يشمل هذا النموذج الاستثمار في "الصكوك المرتبطة بالوقف النقدي (CWLS) و"الودائع المرتبطة بالوقف النقدي (CWLD)"، ومنصات التمويل الجماعي، وإدارة الوقف المنتج لمؤسسات الأعمال الاجتماعية التابعة للمحمدية (أعمال المحمدية). تبين أن فعالية هذا النموذج تعتمد على ثلاثة عناصر رئيسية: الوعي الوقفي، والتدريب وبناء القدرات، والتعاون الاستراتيجي مع الأكاديميين والممارسين في مجال التمويل الإسلامي. ويؤكد التحليل الكمي أن السيطرة السلوكية المدركة (PBC)، والمعايير الذاتية (SN)، والإدراك الفعلي للفائدة (PU)، والشرعية التكنولوجية (TL) تؤثر بشكل كبير في تبني التكنولوجيا في إدارة الوقف الرقمي. ولتعزيز استدامة إدارة الوقف الرقمي، يجب على "المحمدية" تعزيز التنسيق المؤسسي، وزيادة الاستثمار في البنية التحتية الرقمية، وتنفيذ برنامج منظم ومستمر نحو الأمية الرقمية. ومن المتوقع أن تسهم هذه المبادرات الاستراتيجية في تسهيل التبنى الأوسع لنظم إدارة الوقف المعتمدة على التكنولوجيا، مما يحسن من الكفاءة والشفافية والأثر الاجتماعي والاقتصادي طويل الأجل في العصر الرقمي.

APPROVAL PAGE

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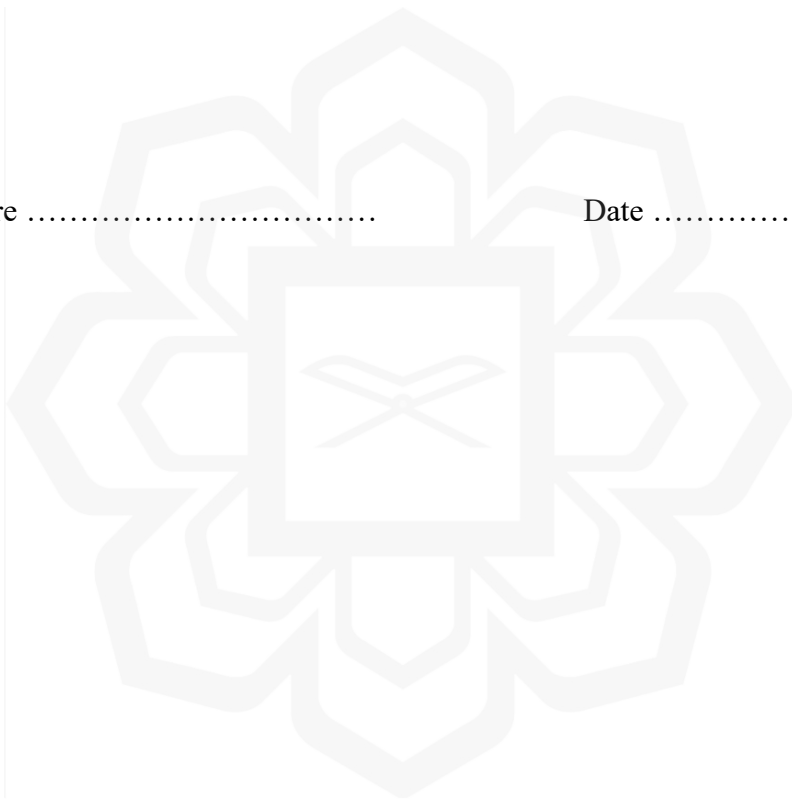
DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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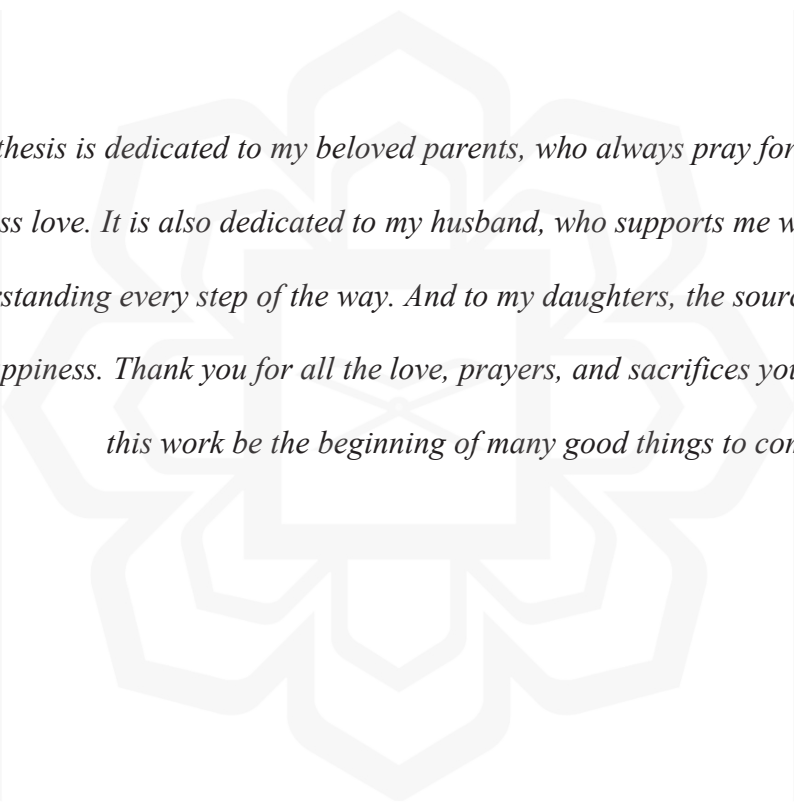
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This thesis is dedicated to my beloved parents, who always pray for me and give me endless love. It is also dedicated to my husband, who supports me with patience and understanding every step of the way. And to my daughters, the source of my strength and happiness. Thank you for all the love, prayers, and sacrifices you have given. May this work be the beginning of many good things to come.

ACKNOWLEDGEMENTS

All glory is due to Allah, the Almighty, whose Grace and Mercies have been with me throughout the duration of my programme. Although it has been taxing, His Mercies and Blessings on me ease the herculean task of completing this thesis.

I am most indebted to my supervisor, Assoc. Prof. Dr Syed Musa Bin Syed Jaafar Alhabshi, whose enduring disposition, kindness, promptitude, thoroughness and friendship have facilitated the successful completion of my work. I put on record and appreciate his detailed comments, useful suggestions and inspiring queries which have considerably improved this thesis. His brilliant grasp of the aim and content of this work led to his insightful comments, suggestions and queries, which helped me a great deal. Despite his commitments, he took time to listen to and attend to me whenever requested. The moral support he extended to me is, without a doubt, a boost that helped in building and writing the draft of this research work. I am also grateful to my co-supervisors, Assoc. Prof. Ashurov Sharofiddin and Assoc. Prof. Dr. Amirsyah Tambunan, whose support and cooperation contributed to the outcome of this work.

Lastly, my gratitude goes to my beloved husband and lovely children, for their prayers, understanding and endurance while away.

Once again, we glorify Allah for His endless mercy on us, one of which is enabling us to successfully round off the efforts of writing this thesis. Alhamdulillah.

TABLE OF CONTENTS

Abstract	ii
Abstract in Arabic.....	iv
Approval Page	vi
Declaration	vii
Copyright Page.....	viii
Dedication	ix
Acknowledgements	x
List of Tables.....	xvi
List of Figures	xvii
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the Study	1
1.2 Problem Statement	3
1.3 Research Questions And Objectives	5
1.3.1 Research Question	6
1.3.2 Research Objectives.....	7
1.4 Significance of Study.....	7
1.4.1 Academic Significance	7
1.4.2 Practical Significance.....	8
1.5 Research Limitations	9
1.6 Organisation of Study.....	10
1.7 Scope of the Study.....	14
1.8 Definitions of Important Terms	14
1.9 Summary.....	16
CHAPTER TWO LITERATURE REVIEW	17
2.1 An Introduction	17
2.2 The Concept of Waqf Properties.....	17
2.2.1 Juristic Perspectives on Waqf Property, Technology, and Funds	18
2.2.2 Types of Waqf Properties.....	20
2.2.3 Essential Considerations of Waqf Properties	23
2.2.4 The Administration and Development of the Institution of Waqf	24
2.3 Waqf Performance.....	28
2.3.1 The Factors Affecting Waqf Performance: Environment, Technology, Measurement.....	29
2.3.2 Management Attributes of Integrated Waqf Model.....	33
2.3.3 Performance Measures of Integrated Waqf Model.....	35
2.4 Development of Waqf Management	39
2.4.1 Traditional Method Waqf Management.....	41
2.4.2 Challenges in Managing Conventional Waqf	43
2.4.3 Modernisation and Innovation in Waqf Management	45
2.5 Management Information System	47
2.5.1 Technology Management.....	48
2.5.2 Technology Adoption Model	49

2.5.3	Types of Technology Used in Waqf Management	52
2.6	Legitimising Technology Use In Waqf Management	53
2.6.1	Islamic Law Perspective	54
2.6.2	Fatwas on Modernisation of Waqf Management	56
2.7	Social-Business Integration	58
2.7.1	Business Integration Concept.....	59
2.7.2	The Potential of Waqf as an Instrument of Economic Empowerment	61
2.7.3	Social - Business Integration Models in Waqf Management.....	62
2.7.4	Implementation of Social-Business in Waqf Management.....	64
2.8	Comparative Study	66
2.8.1	Waqf Practices in Indonesia.....	66
2.8.2	Best Practice Waqf from Some Muslim Countries.....	68
2.9	Theoretical and Conceptual Framework.....	72
2.9.1	Theoretical Foundation	72
2.9.2	Prior Empirical Studies	77
2.9.3	Conceptual Framework.....	79
2.10	Summary	84
 CHAPTER THREE: THE MUHAMMADIYAH AS A WAQF ORGANISATION		86
3.1	Introduction.....	86
3.2	History and Evolution of Muhammadiyah Waqf.....	86
3.2.1	Founding Principles and Historical Development	87
3.2.2	Establishment of Waqf Institutions	89
3.3	Structure of the Council for Waqf Utilisation.....	91
3.4	Waqf Asset Management in Muhammadiyah.....	96
3.5	Social and Economic Impact of Muhammadiyah Waqf.....	99
3.5.1	Educational Empowerment	99
3.5.2	Health Empowerment	100
3.5.3	Economic and Social Empowerment.....	101
3.5.4	The Da'wah and Socio-Religious Empowerment	101
3.6	Challenges in the Management of Muhammadiyah Waqf Organisation.....	102
3.7	Future Directions For Muhammadiyah Waqf Organisation	107
3.8	Summary.....	110
 CHAPTER FOUR: RESEARCH METHODOLOGY		112
4.1	Introduction.....	112
4.2	Types and Approaches of Research	112
4.2.1	Study Mixed Methods.....	112
4.2.2	Case Study Approach.....	113
4.3	Research Design	114
4.3.1	Stage I: Identification (Qualitative Method)	116
4.3.1.1	Data Collection	116
4.3.1.2	Content Analyses	117
4.3.1.3	Result	118
4.3.2	Stage II: Construction (Qualitative Method).....	118
4.3.2.1	Data Collection	119
4.3.2.2	Analyses	122

4.3.2.3 Result	123
4.3.3 Stage III: Hypothesis testing (Quantitative Method).....	123
4.3.3.1 Data Collection: Survey & Questionnaire.....	123
4.3.3.2 Analyses	126
4.3.3.3 Hypothesis.....	128
4.3.3.4 Result	132
4.3.4 Stage IV: Conclusion and Recommendation	133
4.4 Data Analysis Tools	133
4.4.1 Qualitative Data Analysis	133
4.4.2 Quantitative Data Analysis.....	135
4.5 Summary.....	138

CHAPTER FIVE: MUHAMMADIYAH WAQF POLICIES AND OPERATIONS IN THE TECHNOLOGICAL 139

5.1 Introduction.....	139
5.2 The Muhammadiyah Waqf Institutional Network	141
5.3 Waqf Policies in Muhammadiyah	145
5.3.1 Administration and Management of Muhammadiyah Waqf.....	146
5.3.2 The Muhammadiyah Waqf Framework.....	149
5.4 In-Depth Internal Analysis of Muhammadiyah Wakaf Management	158
5.4.1 Strengths in the Management of Muhammadiyah Waqf	159
5.4.1.1 Centralised and Secure Ownership:	159
5.4.1.2 Strict Supervision System:	160
5.4.1.3 Extensive Organisational Network	161
5.4.1.4 Diverse Councils for Special Sector Management	162
5.4.1.5 Financial Sustainability through Muhammadiyah Social Enterprise.....	162
5.4.2 Weaknesses in the Management of Muhammadiyah Waqf.....	165
5.4.2.1 Big Data at the Central Level Has Not Been Completed	165
5.4.2.2 Complicated Administrative Process	166
5.4.2.3 Limited Application of Information Technology	166
5.4.2.4 Complex Council Coordination.....	167
5.5 Evaluation of Muhammadiyah’s Technological Readiness for Waqf Management.....	168
5.6 Summary.....	172

CHAPTER SIX: CONSTRUCTION OF MUHAMMADIYAH’S DIGITAL SOCIO-BUSINESS WAQF MODEL (DSB-WM)..... 173

6.1 Introduction.....	173
6.2 The Concept of Digital Socio-Business Waqf Model (DSB-WM).....	174
6.3 Finding and Analysis.....	178
6.3.1 Theme 1: The Legitimacy of Technology in Waqf Management.....	183
6.3.2 Theme 2: The Adoption of Technology in Waqf Management	186
6.3.3 Theme 3: The Integration of Social Businesses for Sustaining Waqf Management	191
6.3.4 Theme 4: The Challenges and Barriers to Adopting DSB-WM	195
6.3.4.1 Limited Human Resources (HR) and Traditional Mindset	197

6.3.4.2	Technology and Infrastructure Limitations	198
6.3.4.3	Technology Implementation Costs	199
6.3.4.4	Low Waqf Literacy in Society	199
6.3.4.5	Lack of Coordination and Collaboration.....	200
6.3.5	Theme 5: The Opportunities and Innovations in DSB WM	201
6.3.5.1	Digitalisation in Waqf Management.....	203
6.3.5.2	Innovation of Waqf Financing Scheme	204
6.3.5.3	Human Resource Development and Technology Literacy	205
6.3.5.4	Transparency and Accountability in Waqf.....	205
6.3.6	Theme 6: Suggestion to Adopt the DSB WM.....	206
6.4	Discussion	209
6.5	Summary.....	217

**CHAPTER SEVEN: FACTORS INFLUENCE THE MUHAMMADIYAH
DIGITAL SOCIO-BUSINESS WAQF MODEL..... 218**

7.1	Introduction.....	218
7.2	Background of Quantitative Respondents	220
7.3	Finding and Analysis.....	222
7.3.1	Validity and Reliability Test.....	223
7.3.2	Structural Model Test	226
7.3.3	Hypothesis Testing	227
7.3.4	Indirect Hypothesis Testing	231
7.4	Discussion.....	233
7.4.1	Perceived Behavioural Control (PBC).....	233
7.4.2	Perceived Ease of Use (PEOU).....	235
7.4.3	Perceived Usefulness (PU).....	237
7.4.4	Subjective Norm (SN).....	240
7.4.5	Technology Legitimacy (TL).....	242
7.4.6	Mediating Hypotheses	243
7.5	Summary.....	248

**CHAPTER EIGHT: FINDINGS, CONCLUSIONS, IMPLICATIONS AND
RECOMMENDATIONS..... 250**

8.1	Findings	250
8.1.1	Research Objective #1: Existing Framework for Muhammadiyah Waqf Management	250
8.1.2	Research Objective #2: Construct and Adopt Digital Technology in Waqf Management.....	251
8.1.3	Research Objective #3: Factors Influencing Technology Adoption	252
8.2	Conclusions.....	253
8.3	Implication	254
8.3.1	Theory Implications.....	254
8.3.2	Policy Implications	256
8.3.3	Practical Implications.....	258
8.4	Recommendations	259

REFERENCES 261

APPENDIX I: INTERVIEW QUESTIONS AND THEMATIC FRAMEWORK.....	277
APPENDIX II: THE QUESTIONNAIRE OF TECHNOLOGICAL TRANSFORMATION IN WAQF MANAGEMENT: A STUDY ON SOCIAL-BUSINESS INTEGRATION WITHIN THE MUHAMMADIYAH ORGANIZATION	282
GLOSSARY	286
INDEX.....	290



LIST OF TABLES

Table 1.1	Muhammadiyah Data Recorded in SIMAM	4
Table 2.1	Logic Model of Organisational Results for Waqf Institutions	37
Table 2.2	Prior Empirical Studies	78
Table 3.1	Muhammadiyah Aset Management	97
Table 4.1	Interview Informants	120
Table 4.2	Indicators of the Questionnaire	124
Table 4.3	Sample Size Recommendation in PLS-SEM for a Statistical Power of 80%.	138
Table 5.1	Waqf Management Policy in Muhammadiyah	140
Table 5.2	Academic Literature Aligns with Waqf Management in Muhammadiyah	140
Table 5.3	The Process of Collecting Muhammadiyah Waqf Asset	148
Table 6.1	Key Informants	181
Table 6.2	Reference and Coverage Legitimacy in Waqf Management	184
Table 6.3	Reference and Coverage Technology in Waqf Management	188
Table 6.4	Reference and Coverage Social Business Integration (SBI)	192
Table 6.5	Reference and Coverage Challenges and Barriers	196
Table 6.6	Reference and Coverage Opportunities and Innovations	202
Table 7.1	Distribution of Respondent	221
Table 7.2	Outer loading and Average Variance Extract (AVE)	224
Table 7.3	Validity Test Results	225
Table 7.4	Alpha Value Test Cronbach's	226
Table 7.5	Structural Model Testing	226
Table 7.6	Hypothesis Testing	229
Table 7.7	Intermediation Hypothesis Testing	231

LIST OF FIGURES

Figure 2.1	Decentralised Administration of Waqf	25
Figure 2.2	Semi-Decentralised Administration of Waqf Family	26
Figure 2.3	Semi-Decentralised Administration of Waqf Public	26
Figure 2.4	Centralisation Administration of Waqf Public	27
Figure 2.5	Management of Waqf Model	34
Figure 2.6	Framework for Measuring Waqf Performance	36
Figure 2.7	Conceptual Framework	80
Figure 3.1	Muhammadiyah Waqf Land	98
Figure 4.1	Research Design	115
Figure 4.2	Hypothesis Framework	129
Figure 5.1	Organisational Structure of the Muhammadiyah	141
Figure 5.2	The Muhammadiyah Waqf Institutional Network	143
Figure 5.3	The Muhammadiyah Waqf Management (2020)	150
Figure 5.4	The Muhammadiyah Waqf Framework	151
Figure 6.1	Digital Socio-Business Waqf Model	175
Figure 6.2	Hierarchy Map	180
Figure 6.3	Mapping Stakeholders with Relevant Theme	181
Figure 6.4	The Muhammadiyah's Digital Socio-Business Waqf Model	214
Figure 7.1	Path Analysis using Smart PLS	228

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Waqf has long been recognised as one of the most powerful instruments of Islamic social finance, with immense potential to drive social welfare, education, and economic development. In Indonesia, home to the largest Muslim population in the world, the potential for waqf is valued at trillions of rupiah annually. However, despite this potential, actual waqf collection and utilisation remain far below expectations, leaving a substantial gap between waqf's potential and its realised impact. This disparity raises critical questions about how waqf can be managed more effectively to achieve its role as a sustainable socio-economic driver.

To address this issue, it is essential to revisit the waqf concept within Islamic social finance. Waqf is a shariah-based voluntary institution that aligns with the maqasid al-shariah (the higher objectives of Islamic law). From both religious and philosophical perspectives, charitable actions are believed to bring prosperity and security. The Qur'an explicitly encourages wealth circulation and charitable giving. Surah Al-Hadid verse 7 positions waqf as a perpetual form of sadaqah and infaq that contributes to economic growth and social justice.

In practice, waqf represents an act of worship and spiritual upliftment for the waqif (donor) and serves as a strategic instrument for economic empowerment. Cash waqf is one of the most innovative forms, where monetary contributions are permanently dedicated to specified purposes. Cash waqf programs, such as poverty alleviation and community development, have been widely promoted as complementary resources to address needs unmet by government initiatives (Mohsin, 2013). From an Islamic socio-economic perspective, cash waqf is both accessible and sustainable, requiring no financial cost beyond the donor's initial contribution (Ibrahim et al., 2013; Mohsin, 2013).

Poverty alleviation is one reason for establishing a waqf fund and a waqf for a mosque or similar religious endowment purposes. Some current initiatives and policies are designed to reduce poverty, including income inequality and massive food production. For example, Kyai Haji Ahmad Dahlan, a founder of the *Muhammadiyah* organisation in Indonesia, has successfully adopted waqf to enhance social welfare. Although the organisation focused initially on education, *Muhammadiyah* established itself as a social welfare institution for the next generation (Mu'thi et al., 2015).

Muhammadiyah is the most prominent Islamic organisation in Indonesia and the Islamic world (Nashir, 2015). A United States anthropologist, James L. Peacock (1986:26), also pointed out that *Muhammadiyah* is Southeast Asia's most robust organisation. From the point of view of the success of the social enterprise of Muhammadiyah, the Islamic movement established by Kyai Dahlan is the most prominent modern Muslim social institution in the Islamic world (Nurcholish Madjid, 2005). This is attested by the report of the Central Board of Muhammadiyah 2010-2015 (Pimpinan Pusat Muhammadiyah, 2015a) on the development of Muhammadiyah Social Enterprise, particularly in education, health, community welfare, economic and da'wah, and extensive waqf assets and improvements.

As a vision for growth, the *Council for Waqf Utilisation* establishes asset management of Muhammadiyah's function in the form of *waqf* property, funds, and other organisations' assets in a professional, transparent, accountable, and productive manner. The concept has been pioneered by Kyai Haji Ahmad Dahlan and is related to reporting the waqf assets' principal value contributions and performance. According to the international accounting framework and reporting standards, the asset definition and recognition criteria related to the value in future benefits from past transactions controlled by the corporation (IASC,1997; FASB,2001; IAI,2009) are adopted for determining waqf asset valuation.

Despite this vision, internal and external challenges persist (Zubir, 2016). Many endowments lack proper and effective utilisation of waqf assets, including property, land, and funds. Within this landscape, Muhammadiyah, one of Indonesia's largest Islamic organisations, plays a strategic role as a *nazir* (waqf manager) and as an example and mentor for other waqf institutions. In the 2nd National Work Meeting of 2024, the

Council for Waqf Utilisation of the Central Board of Muhammadiyah revealed that waqf assets managed by this organisation reached 21,000 hectares of waqf land and fixed assets throughout Indonesia (Majelis Pendayagunaan Wakaf Muhammadiyah, 2023). The effectiveness of waqf, referring to achieving the goals of waqf for the benefit of the people, is in line with the principle of *maqasid al-shariah* (Ghani & Aziz, 2023; Hassan & Shahid, 2010).

The productivity aspect of waqf refers to the ability to produce sustainable economic benefits. Productive waqf can be important in poverty alleviation and economic development (Kahf, 2003a). While Muhammadiyah's waqf practices demonstrate a remarkable model of Islamic social enterprise, significant challenges remain in optimising waqf utilisation and ensuring sustainability. The underutilisation of waqf assets and the limited application of technological and business innovations reveal a gap between waqf's potential and its realised impact. Therefore, this study sought to explore the legitimacy of technology in waqf management and the integration of social business practices. The aim was to provide valuable insights into how Muhammadiyah can enhance the sustainability and socio-economic contribution of its waqf assets, thereby contributing to poverty alleviation and economic development.

1.2 PROBLEM STATEMENT

Muhammadiyah is widely recognised as one of the most successful Islamic organisations in the world in terms of asset management. Through its extensive network of schools, universities, hospitals, mosques, and social enterprises, Muhammadiyah has become one of the wealthiest Islamic organisations globally (Seasia.stats, 2025). This remarkable achievement reflects its historical strength in mobilising, managing, and utilising waqf and other assets productively to support education, health, and social welfare (Nashir, 2015).

However, this recognition is built mainly on perception rather than consolidated, verifiable, and comprehensive data. Despite the vast scale of its resources, Muhammadiyah does not yet possess a big integrated data system (Majelis Pendayagunaan Wakaf Muhammadiyah, 2023b; Marfaih, 2024) that can accurately

record, monitor, and analyse its waqf assets. The current waqf management framework is decentralised (Pimpinan Pusat Muhammadiyah, 2015a), local branches independently manage their waqf and institutional assets, while financial administration is partially centralised. While effective in promoting autonomy, this structure has resulted in fragmented reporting and limited transparency at the organisational level (Mulanda et al., 2024). Muhammadiyah lacked consolidated real-time information to enable evidence-based planning, accountability, and sustainable asset development.

Table 1.1 Muhammadiyah Data Recorded in SIMAM

Category	Total Assets		User Status		
	Quantity	Area/Units	User Status	Quantity	Percentage
Land	26,653 plots	218,023,899 m ²	Registered Users	13,377	100%
Buildings	14,258 units	421,966,697 m ²	Active Input	5,796	43.33%
Movable Assets	1,719,220 items	–	Not Yet Input	7,581	56.67%
Vehicles	2,101 units	–			

To address these limitations, Muhammadiyah has introduced the Muhammadiyah Asset Management Information System (SIMAM), an initiative aimed at digitalising asset governance. As of the latest record, SIMAM has documented **26,653 land plots (218 million m²)**, **14,258 buildings**, **2,000,000 movable assets**, and **2,098 vehicles**. The system has registered **13,377 users**, yet only **43.33% (5,796 users)** actively input data, leaving **7,581 users inactive (simam.wakafmu.org, 2025)**. Table 1.1 illustrates the immense scale of Muhammadiyah’s asset base and the ongoing challenges in ensuring consistent adoption of SIMAM across its decentralised network. While SIMAM represents a significant step toward modern asset governance, uneven implementation undermines efficiency, weakens organisational control, and prevents the establishment of a unified framework for asset optimisation.

Beyond technical and administrative aspects, Muhammadiyah faces a deeper challenge related to the socio-religious legitimacy of technology adoption. As a faith-based organisation that is generally progressive and supportive of technological

innovation, Muhammadiyah requires a clear normative framework to ensure wider acceptance of digital systems (Pimpinan Pusat Muhammadiyah, 2023). Adopting waqf and asset management technology cannot be justified solely on efficiency and modernisation (Majelis Pendayagunaan Wakaf Muhammadiyah, 2023). It must also be aligned with Islamic principles and formally endorsed by the Council of Tarjih and Tajdid Muhammadiyah. In the absence of an official fatwa or guideline affirming the shariah-compliance of digital systems, many local managers remain hesitant to transition from manual to digital practices (Asy'ari, 2017a).

Thus, Muhammadiyah's waqf management is marked by a paradox (Pimpinan Pusat Muhammadiyah, 2015a). On one hand, it has demonstrated global success in building and sustaining assets, serving as a model of Islamic organisational resilience and productivity. On the other hand, the absence of reliable big data, the fragmentation caused by decentralisation, and the lack of shariah endorsement for technology adoption constrain its ability to enhance transparency, strengthen accountability, and ensure long-term sustainability.

This study addressed these gaps by exploring how Muhammadiyah can develop an operationally effective and socio-religiously legitimate integrated digital framework for waqf management. By situating the analysis within Muhammadiyah's context, the research contributes to academic discourse on digital transformation in Islamic social finance and the practical governance of one of the world's leading Islamic organisations.

1.3 RESEARCH QUESTIONS AND OBJECTIVES

This study was designed to investigate how integrating technological, social, and business aspects can play a role in the management of Muhammadiyah waqf. In this context, legitimacy (Suchman, 1995) becomes an important element determining whether various stakeholders, including the community and religious authorities, can accept the extent to which technology is integrated into waqf management. This legitimacy includes two main aspects: sharia legitimacy, which ensures that the application of technology remains by Islamic principles, and social legitimacy, which

ensures that the technology (Al-rahmi et al., 2017) and social business model (Yunus, 2010) meet the expectations of the community and related stakeholders. By exploring the challenges and opportunities, this study aimed to increase the effectiveness and legitimacy of waqf management significantly.

The technology applied must increase transparency, accountability, and efficiency (Thaker et al., 2018), but still requires validation in terms of shariah legitimacy to ensure that there is no deviation from the religious norms Muhammadiyah holds. Through in-depth analysis, it is hoped that this study can identify a management model that is not only in line with shariah demands but is also able to answer the needs of faith-based organisations in facing economic and social challenges in the digital era, while maintaining legitimacy in the eyes of the community and other stakeholders.

1.3.1 Research Question

In investigating the waqf management technology in a socio-business context, the following research questions were developed:

- i. How adequate are the existing Muhammadiyah Waqf framework, policies, and operations as requirements for developing a technology management system within the integrated socio-business system?
- ii. How do factors, particularly technological legitimacy and alignment with shariah principles and stakeholder expectations, influence the construction of Muhammadiyah's socio-business technology waqf model in the digital asset era?
- iii. How do significant factors influence the potential performance of the Digital Waqf model/fund, and how does integrating technology with socio-business elements enhance its sustainability and effectiveness?

1.3.2 Research Objectives

To investigate Waqf management technology in a socio-business context, the main objectives of this study were as follows:

- i. To assess the adequacy of Muhammadiyah's waqf framework, policies, and operations as requirements for a technology management system within the integrated socio-business system.
- ii. To determine the significant factors influencing the construction of Muhammadiyah's socio-business technology waqf model in the digital asset era, with particular focus on technological legitimacy, shariah compliance, and stakeholder expectations.
- iii. To identify the significant factors influencing the performance of the Digital Waqf model/fund, especially integrating technology with socio-business elements to enhance sustainability and effectiveness in waqf management.

The objectives of this research were prepared to answer the problem formulation that has been determined directly. Each objective reflects an important aspect of the research, starting from the legitimation process, integrating social-business aspects, analysing challenges and opportunities, evaluating stakeholder perceptions, and formulating an ideal model. With these objectives, the research is expected to comprehensively understand the legitimacy of waqf management technology and social-business integration in Muhammadiyah organisations.

1.4 SIGNIFICANCE OF STUDY

1.4.1 Academic Significance

1. Development of Legitimacy Theory:
 - a. Expanding understanding of the technological legitimation process in the context of religious organisations, especially in waqf management.

- b. Identifying factors that influence the acceptance and adoption of technology in traditional institutions.
2. Socio-Business Integration:
 - a. Developing a new conceptual framework for integrating social and business aspects in technology-based waqf asset management.
 - b. Enriching the literature on hybrid management that combines social and commercial objectives in the context of religious institutions.
3. Modern Waqf Management Model:

Contributing to the development of a theoretical model for waqf management that integrates modern technology with traditional values.

1.4.2 Practical Significance

The results of this research can be a valuable reference for Muhammadiyah and other waqf institutions. This aligns with suggestions by Huda et al. (2017) for more applicable research in Islamic finance. By providing insights into technology adoption and effective social-business integration, this research can improve the efficiency and effectiveness of waqf management in Indonesia and perhaps other Muslim countries.

1. Optimising Waqf Management:

Providing practical guidance for Muhammadiyah and similar organisations in adopting and implementing technology for more effective and efficient waqf management.
2. Change management:

Assisting Muhammadiyah in identifying and overcoming challenges in the transition process towards technology-based waqf management.
3. Increased Transparency and Accountability:

Offering insight into how technology can increase transparency and accountability in Waqf management, which can increase public trust.

4. **Organisational Development Strategy:**
Providing an empirical basis for Muhammadiyah to formulate long-term strategies for modernising waqf asset management.
5. **Implementation Guide:**
Producing concrete recommendations regarding the ideal model of technology integration in Waqf management, which is based on Muhammadiyah's characteristics and values and can be implemented directly by the organisation.

The research contributes to developing knowledge in waqf management and technology by focusing on its academic and practical significance. It would directly benefit Muhammadiyah and similar organisations by improving their waqf management practices.

1.5 RESEARCH LIMITATIONS

The research's limitations were as follows:

1. **Organisational Focus:**
This research was limited to the Muhammadiyah organisation and did not include Islamic organisations or other waqf institutions in Indonesia.
2. **Geographic Coverage:**
This study only covered the management of Muhammadiyah waqf in Indonesia, not its branches or affiliates abroad.
3. **Types of Waqf:**
The research focused on productive waqf management and did not cover all types of waqf that Muhammadiyah may manage.

4. Technology Type:

This research focused on information and management technology relevant to waqf management; it did not cover all the technology that Muhammadiyah may use.

5. Technology Implementation:

This research focused on technology legitimation and integration, not the technical aspects of implementing a particular technology.

These limitations helped clarify the scope of the study and avoid unrealistic expectations about it. With clear boundaries, the research focused more on the aspects determined while recognising the excluded but related areas.

1.6 ORGANISATION OF STUDY

Chapter One includes the background of the study, highlighting the importance of waqf in Islam as a shariah-based socio-economic institution and the strategic role of Muhammadiyah in its management. The problem statement identifies the gap between the potential and realisation of waqf in Indonesia and the challenges Muhammadiyah faces in managing it. The study aimed to evaluate Muhammadiyah's waqf framework, analyse the impact of technology on its management, and assess the performance of the digital waqf model. This research has academic and practical significance, contributing to the theory of technological legitimacy and the integration of social-business aspects in waqf. With clear limitations, the study focused on Muhammadiyah in Indonesia, productive waqf types, and relevant technologies.

Chapter Two explores the extensive literature surrounding waqf management, integrating traditional and modern perspectives. It begins with an introduction to waqf properties, delving into their juristic dimensions, classification, and essential considerations. Discussions highlight the administration and development of waqf institutions, emphasising the interplay between legal frameworks, societal needs, and the evolution of management practices. Waqf performance is analysed through factors like environment, technology, and performance measurement, focusing on integrated

waqf models that balance social and financial objectives. The chapter further examines the development of waqf management, contrasting traditional methods with the challenges of conventional approaches and the push for modernisation and innovation. The role of technology is emphasised through management information systems, technology adoption, and case studies showcasing successful implementations in various countries. Additionally, the legitimacy of technology in waqf is explored through Islamic law, fatwas, and the challenges of balancing modernisation with religious principles. Integrating social-business models is a means to harness waqf's economic empowerment potential, address obstacles, and propose strategies to overcome resistance. Comparative analyses of waqf practices in Indonesia and other Muslim countries provide valuable insights, culminating in a conceptual framework grounded in relevant theories and constructs. This chapter serves as a foundation for understanding the dynamics of Waqf Management and its modernisation potential.

Chapter Three explores Muhammadiyah as a socio-religious organisation founded by Kyai Haji Ahmad Dahlan in 1912 with the vision of addressing social issues inspired by Surah Al-Maun. It discusses the historical development and foundational principles of Muhammadiyah's waqf initiatives, emphasising the influence of Islamic teachings. The organisational structure and governance of Muhammadiyah waqf are outlined, highlighting roles, responsibilities, and their integration with broader Muhammadiyah institutions. The chapter also examines waqf asset management, including types of assets, strategies for their development and utilisation, and measures to ensure transparency and accountability. It further analyses waqf's social and economic impacts on education, health, and community welfare, supported by success stories. Challenges the organisation faces, such as internal governance issues and external regulatory and technological barriers, are discussed along with strategies for overcoming them. Lastly, future directions focus on strategic goals, technology integration, and collaboration to enhance the waqf's sustainability and social impact.

Chapter Four explains the research methodology, using a mixed-methods approach combining qualitative methods like interviews and focus group discussions with quantitative surveys. The study examines how Muhammadiyah integrates technology into waqf management, focusing on legitimacy and balancing social and business goals. Data sources include interviews, observations, and organisational

reports, analysed using tools like NVivo and SEM-PLS. This methodology evaluates existing waqf frameworks, identifies factors influencing digital waqf adoption, and develops a management model aligned with Muhammadiyah's goals.

Chapter Five explores Muhammadiyah's waqf policies and operations in the context of technological advancements. It begins by examining the historical background and evolution of Muhammadiyah's waqf framework, the core principles of its management, and its relevance to technological progress. The discussion then delves into Muhammadiyah's existing waqf management policies, focusing on their alignment with technological integration and adaptation to the digital and socio-business landscape. The operational aspects of Muhammadiyah's waqf management are also highlighted, including its current structure, asset management processes, and potential for technological enhancement. Additionally, the chapter identifies key challenges in adopting technology for waqf management while exploring opportunities to enhance transparency, efficiency, and social-business impact. Finally, it evaluates Muhammadiyah's readiness for technology-driven waqf management, outlining criteria for assessing policy and operational suitability, proposing strategic improvements, and concluding with an analysis of Muhammadiyah's preparedness to embrace a tech-enabled waqf system.

Chapter Six examines Muhammadiyah's digital socio-business waqf model through a qualitative approach, utilising NVivo software to analyse key factors influencing its adoption. It discusses data collection methods such as interviews and focus group discussions, followed by a detailed coding process that identifies themes like technological readiness, organisational culture, regulatory frameworks, and community acceptance. The analysis explores the impact of digital literacy, technological access, and cybersecurity on adoption alongside cultural and organisational factors such as leadership and readiness for digital transformation. External elements, including government regulations, shariah compliance, and stakeholder perceptions, are also assessed, while socioeconomic conditions like economic disparities and digital accessibility are examined for their influence. Challenges and opportunities are identified, including fostering collaboration and innovation to address barriers. The chapter concludes with strategic insights on

Muhammadiyah's readiness for implementing a digital waqf model, highlighting NVivo's role in uncovering interrelated dynamics and guiding future strategies.

Chapter Seven quantitatively explores factors influencing the adoption of the Muhammadiyah digital socio-business waqf model, employing the Technology Acceptance Model (TAM) and the Theory of Planned Behaviour (TPB) as theoretical frameworks to analyse the adoption of digital waqf technology. It begins by justifying the use of a quantitative approach and the selection of Structural Equation Modelling-Partial Least Squares (SEM-PLS) for data analysis. The chapter elaborates on integrating TAM and TPB, linking perceived usefulness, perceived ease of use, attitudes, subjective norms, and perceived behavioural control to behavioural intention and digital waqf performance. Hypotheses are developed to investigate these relationships, supported by data collection through surveys or questionnaires. Using SEM-PLS, the study evaluates the reliability and validity of the model and the impact of key variables on digital waqf adoption. Findings highlight significant relationships between technology, social factors, and behavioural intention, providing insights into the digital transformation of Muhammadiyah's waqf practices. The discussion connects these findings to TAM and TPB, emphasising implications for optimising digital waqf management. The chapter concludes with practical recommendations for leveraging TAM and TPB insights to enhance Muhammadiyah's digital waqf model in the era of digital assets.

Chapter Eight concludes the study by summarising key findings from qualitative and quantitative analyses, emphasising their implications for Muhammadiyah's digital socio-business waqf model. It highlights the critical role of technological readiness, organisational culture, regulatory frameworks, and socioeconomic conditions in driving digital waqf adoption. Practical recommendations include enhancing digital literacy, fostering innovation, aligning with shariah compliance and regulations, and addressing resistance to change and technological barriers. The chapter also outlines strategies for sustainable implementation, such as building partnerships, leveraging advanced technology, and ensuring socio-economic benefits. These insights aim to guide Muhammadiyah in optimising its digital waqf practices for greater transparency, efficiency, and societal impact.

1.7 SCOPE OF THE STUDY

This study was bounded within the context of Muhammadiyah as one of the largest Islamic socio-religious organisations in Indonesia, focusing specifically on its waqf management system. The scope does not cover all Islamic organisations or other instruments of Islamic social finance, such as zakat or sadaqah, but concentrates on waqf as the primary subject of inquiry. The research emphasises the organisational and managerial aspects of Muhammadiyah waqf, particularly in relation to technology integration and socio-business models. Geographically, the study was limited to Indonesia, although the findings may offer insights applicable to other contexts. Conceptually, the study was framed within theories of legitimacy, stakeholder engagement, technology adoption, and socio-business integration, without attempting to provide a comprehensive analysis of all related theoretical perspectives.

1.8 DEFINITIONS OF IMPORTANT TERMS

1. Waqf: A perpetual Islamic endowment where assets are dedicated for religious, educational, or social welfare purposes (Kahf, 2003).
2. Waqif: The donor or founder of a waqf who determines its type, beneficiaries, and conditions (Mohsin & Muneeza, 2020).
3. Al-Mawquf (Waqf Property): The asset dedicated as waqf, including land, buildings, or cash, which must remain intact (Cizakca, 1998).
4. Mutawalli: The trustee or manager responsible for administering waqf assets (Mohsin & Muneeza, 2020).
5. Nazir: The supervisor who oversees waqf management and ensures shariah compliance (Medias & Pratiwi, 2019a).
6. Al-Mawquf 'Alaih (Beneficiaries): The recipients of waqf benefits, such as individuals, communities, or institutions (Hasan, 2010).

7. Socio-Business Integration: The combination of social objectives with business practices to generate shared value (Yunus, 2023).
8. Legitimacy: The perception that an organisation's actions are appropriate within societal norms and values (Suchman, 1995).
9. Technology Legitimacy: Stakeholder acceptance of technology use based on trust, accountability, and shariah alignment (Rogers et al., 2019).
10. Technology Acceptance Model (TAM): A theory explaining technology adoption based on perceived usefulness and ease of use (Davis, 1989).
11. Theory of Reasoned Action (TRA): A theory linking attitudes and subjective norms to behavioural intentions (Fishbein & Ajzen, 1975).
12. Theory of Planned Behaviour (TPB): An extension of TRA that adds perceived behavioural control (Ajzen, 1991).
13. Diffusion of Innovation: Explains how innovations are adopted within a social system over time (Rogers, 2003).
14. Human Capital Theory: The view that skills and knowledge are investments that improve productivity (Becker, 1964).
15. Shariah Governance: Ethical and operational principles ensuring Islamic institutions comply with shariah (Al-Ghazali, 1058–1111).
16. Muhammadiyah: A major Islamic organisation in Indonesia known for its socio-religious institutions and productive waqf management (Medias & Pratiwi, 2019a).

1.9 SUMMARY

Chapter One highlighted the background of the study by emphasising the importance of waqf as one of the most potent instruments of Islamic social finance, with a crucial role in promoting social welfare, education, and economic empowerment. In Indonesia, the potential of waqf is valued at trillions of rupiah annually, yet its realisation remains far below expectations. Muhammadiyah, as Indonesia's most prominent Islamic organisation, has successfully managed vast waqf assets through schools, hospitals, mosques, and social enterprises. However, despite this achievement, challenges remain in decentralisation, limited transparency, and the absence of a fully integrated digital management system.

The main problem raised in this chapter is the gap between waqf's potential and its actual realisation, along with the need for an operationally effective and shariah-compliant digital framework. The study aimed to assess the adequacy of Muhammadiyah's waqf framework, analyse factors influencing technology adoption, and propose a socio-business-based digital waqf management model. Academically, the research contributes to the development of legitimacy theory in the context of religious organisations. At the same time, it provides recommendations to improve transparency, accountability, and sustainability in Muhammadiyah's waqf management.

CHAPTER TWO

LITERATURE REVIEW

2.1 AN INTRODUCTION

The concept of waqf, an Islamic social finance institution, has played a significant role in Muslim societies for centuries. As a form of perpetual charity, waqf has traditionally involved the donation of immovable and movable properties to fulfil public or family needs. However, in the face of modern challenges and opportunities, the management of waqf institutions is transforming. This evolution encompasses the integration of technology, the adoption of innovative business models, and the implementation of contemporary management practices. The modernisation of waqf management aims to enhance efficiency, transparency, and impact while maintaining the core Islamic principles that underpin this philanthropic institution. This chapter explores the development of waqf management, focusing on integrating social business concepts, adopting technology, and the challenges and opportunities that arise in legitimising these new approaches within the framework of Islamic jurisprudence. The last section is the conceptual framework for this research.

2.2 THE CONCEPT OF WAQF PROPERTIES

According to the owner's preferences and conditions, a waqf is a social finance institution that holds immovable and movable properties that perpetually spend their revenues to fulfil public or family needs (Mohsin et al., 2016a). Once the properties are created as waqf, they are dedicated to Allah (SWT), and the waqf properties will always remain intact (Çizakça, 2013). They cannot be given as a gift, inherited, or sold. Only their revenue is allocated to the beneficiaries (Mohsin et al., 2016). The waqf institution has rapidly grown in the Muslim world and has played a significant role in socio-economic life (Sukmana et al., 2024). This section's main objective is to present an overview of the waqf properties, models, institutions, funds, instrument types, and challenges.

2.2.1 Juristic Perspectives on Waqf Property, Technology, and Funds

According to *Fiqh* (Abdullah, 2020), *waqf* is described in its terminological meaning as giving someone an asset he can gain from or share in his total profit. This advantage is permanently or temporarily available (Kahf, 1999). The definition of the famous *faqeeh* Abu Jahra is ‘to buy land under waqf condition so that no one can sell the land, give or take it as their heritage anywhere’ (Sait & Lim, 2006). It is the extinction of property ownership by the owner and the development of faith in the property for religious purposes, according to the Dictionary of Legal Conditions (Alias, 2014). Encyclopedia of Islam (2009) states that waqf is an estate that the owner disowns or is conditional on an ownership trust to use the estate and its income nobly. This donation can be called the waqf method or operation.

According to the definition of waqf given by the four schools of Islamic law (Abdullah, 2020), the first interpretation given by Imam Abu Hanifah, the founder of the Hanafi School of Law, is ‘the detaining of the property owned by the founder and rendering his proceeds charitable through a loan. According to Imam Abu Hanifah, the founder has the right to return the property to the Waqf into his possession. The owner can also sell the waqf, i.e., it can be revoked. His views on the independence of waqf properties are invalid (Mohsin et al., 2016). Considering these views means a founder who created a waqf can return and sell it (Abdullah, 2020). However, no movable property can be generated as waqf, including books, weapons, horses, or money. Abu Yusuf’s disciples developed a set of legal doctrines contrary to Abu Hanifah’s opinion, which became the Hanafi waqf (al-Zuhaili) definition. Abu Yusuf has mentioned that waqf is valid only if it is irrevocable and cannot be returned to the founder, but is made perpetually.

Regarding the movable properties to be endowed as waqf, Abu Yusuf agreed that no movable property could be endowed as waqf. Still, weapons of war, cattle, and implements of animal husbandry attached to the dedicated waqf land and books can be dedicated as waqf. He based his opinion on the Prophet (PBUH), following a hadith: ‘The Prophet (PBUH) said, Khalid Bin al-Walid has appropriated his horse and armour for the cause of Allah. In his opinion, the waqf of movable belongings is only valid if customary in the Prophet’s time (PBUH) (Mohsin et al., 2016). In contrast with the

latter's view, Zufar approved all mobile properties as waqf. Another Abu Hanifa Imam disciple. They also included the waqf of dirham (pl. *darahim*) and dinar (pl. *dananir*), i.e., *waqf al-nuqud* (cash waqf). Also, Imam Zufar deduced that jewellery could be used as a waqf. His opinion was based on the deed of Hafsa, the Prophet (PBUH) 's wife, and the 'Umar b. Al-Khattab's daughter devoted her jewels to her family. Besides, both Imams Muhammad and al-Sarakhsi had approved all movable properties subject to customary law during the Prophet's (PBUH) time and customs in other times and countries (Cizacka, 2013). For the second school of law, Imam Malik b. Anas, the Law Maliki School founder, agreed with Abu Yusuf's view regarding the irrevocability and perpetuity of waqf, which considers waqf as confinement for Allah's cause.

Furthermore, Imam Malik also agreed on immovable and movable properties as a waqf subject matter, even if it is cash (Abdullah, 2020). Concerning the other two schools of law, Imam al-Shafi'i and Imam Ibn Hanbal defined waqf as the confinement of the property and the pledge of its usufruct in perpetuity for the cause of Allah. They both agreed on the validity of creating immovable and movable properties as a subject matter of waqf (Abu Zuhra, 1972). Previously, the different views of Muslim jurists realised that all four law schools agreed on the irrevocability and perpetuity of the waqf once it was established. Moreover, most Muslim scholars also accept movable properties as a subject matter of waqf since they give different categories of people the right to create a waqf in cash. This (waqf) right is currently needed for fundraising and capital accumulation, generating the much-needed financing to provide different goods and services within Muslim societies (Mohsin et al., 2016).

Moreover, in this digital era, almost all aspects of life depend on technology (Rajan et al., 2021). From the Islamic perspective, there is no conflict between technology and Islam if it does not violate the sharia of Allah (Al-rahmi et al., 2017). Both are balanced and harmonious, creating a treasured trove of science and human civilisation that is better than before. For example, financial technology (fintech) is the progress and adoption of emerging technologies with demographic changes and toward a more socially conscious society within the financial industry (Oseni & Ali, 2018). Three types of fintech services are emerging that could be argued to align with maqāsid al-Sharī'ah, therefore, the Muslim customer's core values. These three types of services are (1) certain types of cryptocurrencies; (2) investment platforms like crowdfunding or

other non-bank technology-based funds and peer-to-peer financing; and (3) other fintech platforms offering digital services such as digital banking or remittances and money transfer (Oseni & Ali, 2018). Moreover, waqf institutions can use relevant technology to improve their management.

The Law of Indonesia 2004 No. 41 on Waqf states that waqf is an expression that holds one's property to another person or institution by handing over a perpetual object whose substance is to be used to benefit the ummah, where the waqf cannot be revoked and perpetuity after being established. Besides, the categories of waqf assets are movable and immovable assets. In this context, Muhammadiyah Waqf has been practising cash waqf as fundraising to develop the existing waqf land since it was founded and can use technology effectively and adequately. However, the effective implementation of productive waqf is still lacking in Muhammadiyah Waqf.

2.2.2 Types of Waqf Properties

According to al-Mawardi, there are two fundamental concepts of waqf, i.e., property and benefit. The waqif is prohibited from selling the waqf property, and the waqif performs waqf with its services in a prescribed manner (Asqalani, 2018). Therefore, it can be stipulated here that there are two essential considerations when performing waqf (Omar et al., 2013), namely:

- i. *Tahbis al-Asl*: Controlling and protecting or preserving the donated assets from damage or loss.
- ii. *Tasbil al-Thamarah*: Channelling the benefits of the asset to *mawquf' alayh* (the beneficiaries).

Moreover, Mohsin et al. (2016) also emphasised that waqf can be classified into two types, namely beneficiaries (*mawquf alaih*) and waqf property (*mauquf*). There are three types of waqf under beneficiaries (*mawquf alaih*), which are waqf *khayri* (public waqf), waqf *dhurri* (family waqf), and waqf *musytarak* (the combination of public and family waqf).

i. Waqf *Khayri* (Public Waqf)

Public waqf is an endowment made by the founder to support the poor's general welfare and society's needy. Usually, the founders create waqfs as buildings, such as mosques, schools, hospitals, orphanage houses, guest houses, basic infrastructure, dedicated books, and land for cemeteries, wells, and weapons.

ii. Waqf *Dhurri* (Family Waqf)

Family waqf is an endowment made by the founder for his children, grandchildren, relatives, or other persons with specificities. If the beneficiaries selected by the founder are no longer alive, then only in this case will the Waqf property be transferred to public welfare purposes.

iii. Waqf *Musyarak* (Combination of Public and Family Waqf)

Mixed waqf is a waqf created by a founder to support the public and their family, i.e., the founder dedicates a portion of his property to his family and another part to the public

As for waqf properties, this type of waqf is divided into three: *Manqul & Ghair Manqul* / Movable and Immovable, *Sahih & Ghair Sahih* / Sound and Unsound, and *Mubashir & Ghair Mubashir* / Direct and Indirect.

i. *Manqul & Ghair Manqul* /Movable and Immovable

Movable waqf is an endowment made by the founder in movable properties, such as cattle and implements of animal husbandry, books, crops, weapons, currency, and joint-stock companies' shares. In contrast, immovable waqf is an endowment made by the founder in the form of immovable properties, such as lands, fields, farms, buildings in mosques, schools, hospitals, or basic infrastructures such as bridges, roads, and water supply, and so on. (Mohsin et al., 2016)

ii. *Sahih & Ghair Sahih* /Sound and Unsound

Sound waqf is founded upon the land, i.e., privately owned freehold property over which the owner held absolute alienation rights. In contrast, an unsound waqf based on state land refers to cases where the land used as the object of waqf legally still has the status of state land (Mohsin et al., 2016)

iii. *Mubashir & Ghair Mubashir* /Direct and Indirect

Direct waqf is an endowment made by the founder to serve the people directly (Kahf, 1999). For example, this could be building mosques for prayer, schools to educate the masses, hospitals to provide health care services, and so on. In contrast, indirect waqf is needed to give the running expenses, i.e., direct waqfs. For example, revenue-generating shops, houses, agricultural lands, and so on, could be dedicated to channelling the revenue generated towards supporting the direct waqfs (Mohsin et al., 2016).

This study examined the types of waqf in the Muhammadiyah organisation, particularly in public waqf. The majority of the waqf in Muhammadiyah is land. Based on a survey conducted by the 2nd National Work Meeting of 2024, the Council for Waqf Utilisation of the Central Board of Muhammadiyah emphasised that waqf assets managed by this organisation reached 21.000 hectares of waqf land and fixed assets throughout Indonesia (Majelis Pendayagunaan Wakaf Muhammadiyah, 2023). Muhammadiyah obtains internal and external funding to use land waqf (Pimpinan Pusat Muhammadiyah, 2015a). Internal financing is sourced from Muhammadiyah members of the organisation who have the vision to save their wealth in the way of Allah (Purwanto, 2017), while external Muhammadiyah contributions are financing from third parties like Islamic banks, financing institutions, or some cooperation with companies (Usman, 2016). Moreover, cash waqf was launched in 2020 to increase fundraising from community contributions (Adinugraha et al., 2024).

2.2.3 Essential Considerations of Waqf Properties

When a property is created as a waqf, it should be specified based on essential considerations: irrevocability, perpetuity, and inalienability.

i. **Irrevocability**

The critical feature of waqf is that most Muslim jurists believe the builder could not revoke that commitment if the property had already been proclaimed waqf. Therefore, a waqf is irrevocable once a founder declares his property a *waqf* and his heirs cannot change his position. These restrictions ensure that the founder or descendants cannot return it until the waqf is created for philanthropic purposes and will remain in the majority. Simultaneously, the Founder receives Allah's (SWT) rewards even after death (Mohsin et al., 2016). Except for temporary waqf, they have been revoked at maturity or early termination (Asraf & Mohd, 2019).

ii. **Perpetuity**

Most Muslim jurists believe it must be perpetual once the waqf is formed. On the one hand, it will ensure that the government or individuals do not require the confiscation of waqf properties. On the other hand, it will provide daily and continuous funding for charitable financing, for example, mosques, hospitals, orphanages, schools, and so on, from the waqf land (Mohsin et al., except for temporary waqf, where the period is specified for targeted beneficiaries (Jafri & Mohd Noor, 2019).

iii. **Inalienability**

This feature surfaces because the waqf property is transferred to Allah (SWT), even though its usufruct can help humans. All jurists agree that no one becomes the waqf property owner, let alone alienate it. Waqf property is thus seen as a "frozen asset." It must not be the subject of any sale, disposition, mortgage, gift, inheritance, or alienation. These conditions and

restrictions will secure continual benefits for the present and future generations (Mohsin et al., 2016). Technically, the Law of Indonesia 2004 No. 41 on Waqf states that all waqf property and usufruct rights are subject to fulfilling the waqf's purpose and existence by the declaration or deed.

2.2.4 The Administration and Development of the Institution of Waqf

In the Islamic era, during the Muhammad PBUH prophethood of Medina, waqf demonstrates Ibadah regarding the first mosque, Masjid Quba. After the Prophet had moved to Medina, before moving to Abu Ayyub Al-Ansari's house, the Prophet Muhammad built a mosque on the land he bought from orphans in Bani Najjar for 800 Dirhams. Thus, Muhammad PBUH donated his land to construct the mosque (Kasdi, 2017).

Furthermore, in the third year of Hijrah, Prophet Muhammad PBUH endowed seven palms or gardens in Medina: A'raf Shafiyah, Dalal, and Barqah. Some *Sahabah* also endowed their properties, which are Abu Talha (garden "Bairaha"), Abu Bakr R.A. (a piece of land in Mecca), Utsman RA (wealth in Khaibar), Ali bin Abi Talib R.A. (fertile soil), Mu'ad bin Jabal (house "Dar al – Ansar") and others, like Anas bin Malik, Abdullah bin Umar, Zubayr ibn al-Awam and Aishah R.A. as ibadah for the mission of Islam Another example is the waqf land of Khaibar by Umar bin Khattab R.A (Baqi, 2015). Based on the hadith, some scholars (Çizakça, 2013; Kahf, 2003b; Kasdi, 2017; Mohsin et al., 2016) have stated that the first waqf was performed in Khaibar.

Ibn' Umar reported that 'Umar acquired land in Khaibar. He came to Allah's Messenger (PBUH) and sought his advice. He said: "Allah's Messenger (PBUH), I have acquired land in Khaibar. I have never acquired property more valuable for me than this, so what do you command me to do with it? He (Allah's Apostle, PBUH) said: "If you like, you may keep the corpus intact and give its produce as sadaqah." So 'Umar gave it as sadaqah, declaring that property must not be sold, inherited, or given away as a gift. Moreover, Umar devoted it to the poor, the nearest kin, the emancipation of enslaved people, and the way of Allah and guests. There is no sin for one who administers it if he eats something from it reasonably or feeds his friends and does not hoard goods (for himself). He (the narrator) said: I nar-rated this hadith to Muhammad, but as I reached the (words) "without hoarding (for

himself) out of it,” He (Muhammad) said: “without storing the property to become rich” – Ibn ‘Aun said: “He who reads this book about waqf, informed me that in it (the words are) ‘without storing the property to become rich (Hadith Sahih Bukhari, #36).

From the hadith above, Prophet Muhammad PBUH ordered Umar to withhold the land substantially and share the benefits with their family and the poor (Kasdi, 2017), which introduced the family waqf concept (waqf *dzurri* or *ahli*) (Kahf, 2003b). However, some scholars (Mohsin & Muneesa, 2020) stated that the hadiths create a *waqf mushtarak/combination of family* and public waqf (figure 3.1). Its administration emphasised that the founder of the waqf would administer his waqf or designate a trustee to administer the waqf on his behalf (Mohsin & Muneesa, 2020).

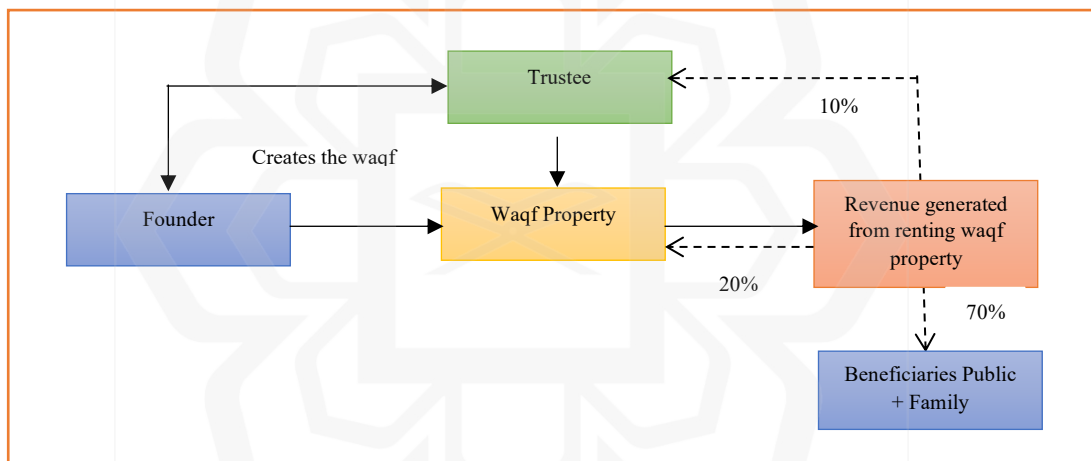


Figure 2.1 Decentralised Administration of Waqf

From the 15th to the 19th century and until the Ottoman period, the waqf properties encouraged the state to organise and supervise these *awqaf* (Mohsin & Muneesa, 2020). In Figure 2.1, the waqf supervision was entrusted to the Shari’ah court (Islamic law court), which managed all the waqf properties, while the individual managed their family waqf (Mohsin, 2010; Mohsin & Muneesa, 2020).

Under good supervision, waqf’s creation peaked when many sultans and rulers established schools, hospitals, mosques, and agricultural land (Kahf, 2003a; Mohsin & Muneesa, 2020). The waqf institution played a significant role during the Islamic

civilisation. However, in the late 19th and early 20th centuries, its functions declined due to the mismanagement of waqf properties.

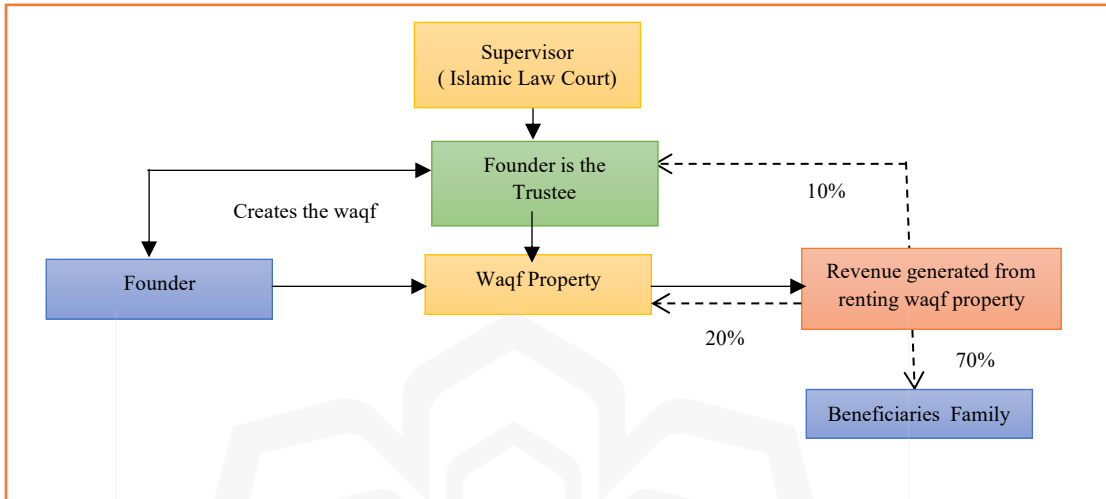


Figure 2.2 Semi-Decentralised Administration of Waqf Family

During the Sultan Mahmud II regime, reform for the waqf institution (Figure 2.3), the Muslim jurist created a ministerial post for waqf. New waqf administrators were designated to administer the affairs of the waqf properties; hence, the Muslim jurists lost control over the waqf because all the waqf properties were under state supervision, that is, centralisation of waqf administration.

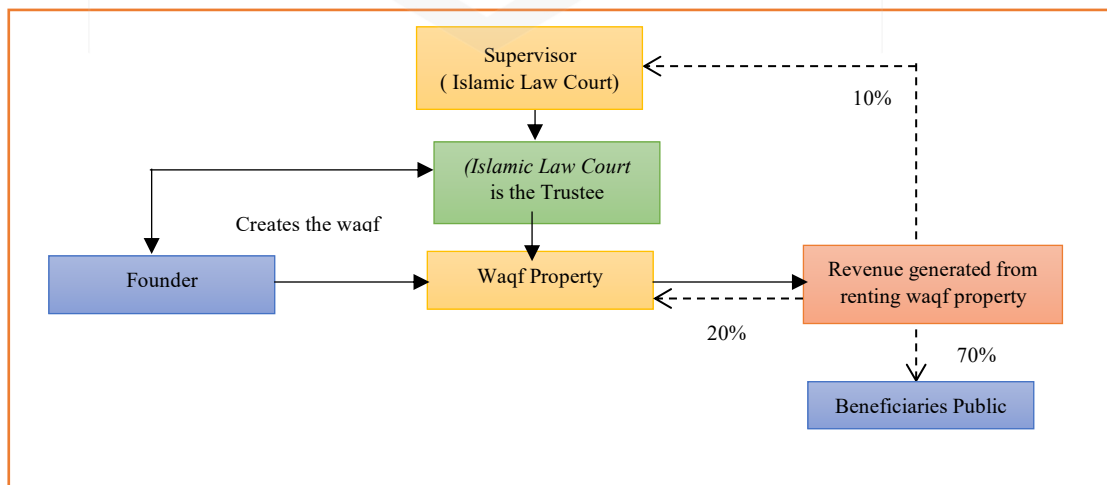


Figure 2.3 Semi-Decentralised Administration of Waqf Public

With such a centralised administration (Figure 2.4), people were discouraged from creating new waqf as they believed their rights to manage the state had taken their waqf. Others feared that the state would confiscate their waqf properties and appoint a non-qualified trustee even if the founder stated clearly in his waqf deed that he set himself to manage his waqf. As time passed, such beliefs and fears came true. Since the newly appointed trustees were getting salaries, almost all confiscated waqf properties were not appropriately managed. Hence, practically all earlier created waqf properties have become neglected, idle, and unproductive in virtually all Muslim countries (Mohsin & Muneesa, 2020).

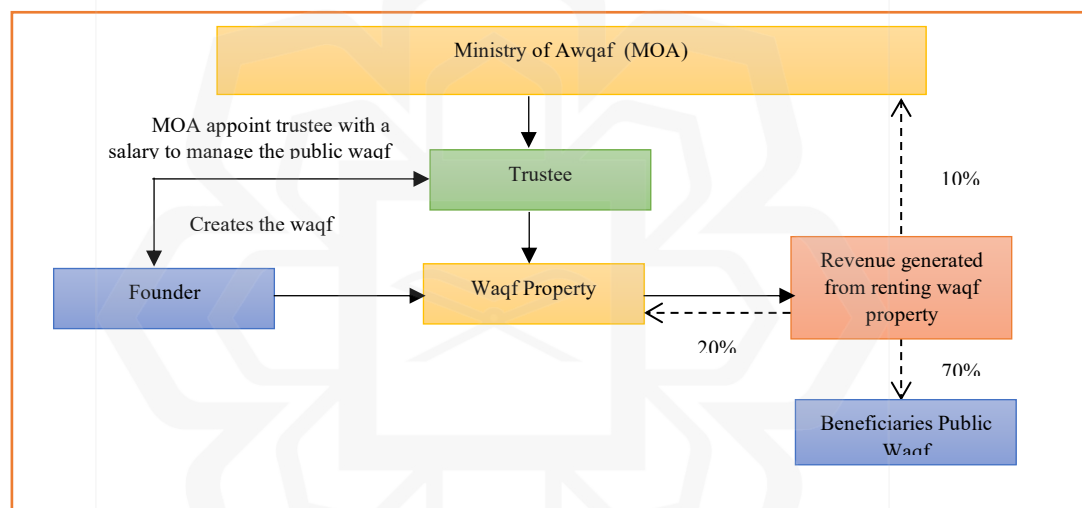


Figure 2.4 Centralisation Administration of Waqf Public

Decentralised or centralised administration is closely related to management and primarily associated with the management level. Therefore, once the institution establishes its management levels, it must determine whether the administration is centralised, decentralised, or combined (hybrid) (Dalling, 2007).

Centralisation is the business structure in which one individual makes essential decisions (such as resource allocation) and provides the primary strategic direction. Most small businesses are centralised, where the owner makes all decisions regarding products, services, strategic direction, and most other significant areas. The advantages of centralised organisations include clarity in decision-making, streamlined policies and

initiatives, and control over strategic direction. The primary disadvantages of centralised organisations include limited opportunities for employees to provide feedback and a higher risk of inflexibility (Brandts & Cooper, 2015).

Decentralisation is a business structure where decision-making is made at every level of the organisation. There are advantages: quick decision and response time, better ability to grow the company, skilled and specialised management, increased employee morale, the link between compensation and responsibility, and better use of lower and middle management. Simultaneously, decentralisation has some disadvantages. There are coordination problems, increased administrative costs due to duplication of effort, and mismatches in operations. Each department/division is often self-centred (its territory), significantly, if not almost totally, dependent on division or department managers (Brandts & Cooper, 2015).

2.3 WAQF PERFORMANCE

One of the aspects least focused on in waqf literature is the independent management of waqf by a non-profit organisation. The revival of waqf institutions creates a need for good performance of waqf assets that might enhance the institution's transparency and accountability. Waqf aims to provide ongoing charity for needy people with a continuous income stream. When there is a good performance, stakeholders such as waqif (giver) and beneficiaries can enjoy its fruit (Azni et al., 2017).

Performance is the effective and efficient use of resources to achieve results and objectives (Mihaiu et al., 2010; Taylor, 2017). Efficient waqf helps preserve valuables in cash or non-cash fixed assets earned from voluntary but permanent wealth distribution in an Islamic society. A waqf institution transforms this value to enhance the socio-economic contributions of Muslims and Islamic entities in a shariah-compliant way. It is considered a charitable capital gift and, more explicitly, "a beautiful loan" to Allah SWT since the Caliph Umar (r.a) with his land in Khaibar date, some initiatives were considered to explore and justify the importance of waqf as (1) a voluntary contribution (Çizakça, 2013), (2) a sustainable development institution

(Mohsin et al., 2016), and (3) an effective socio-economic development tool (Kahf, 2003a).

2.3.1 The Factors Affecting Waqf Performance: Environment, Technology, Measurement

The development of waqf assets is a shared responsibility of various stakeholders, including the community, government, religious institutions, the private sector, and financial institutions (Noor et al., 2018). The strong support from the government and relevant authorities is a motivating factor in providing an enabling environment for waqf development, including legal and regulatory facilitation, the need for transparency, disclosure through appropriate governance standards, and applicable incentives for waqf-related parties. Waqf stakeholders must also embrace the digital era by embracing information technology (Mohamed Salleh et al., 2022). All information related to waqf must be recorded and made available for strategic planning and development purposes. Besides, the stakeholders need performance indicators such as outputs, outcomes, and impacts to measure their efficiency and effectiveness in utilising the funds (Noordin et al., 2017).

i. Environment

Waqf institutions are Islamic non-profit entities representing various social, cultural, and economic activities. Even though many do public services, they are not part of the government (Dafterdar & Bank, 2009). However, their operations are suitable for all sectors of the economy and cover a wide range of industries, including but not limited to real estate, education, health care, social services, and recreation. Being a waqf organisation does not always mean being small. Most are large-scale organisations operating in various countries, controlling significant assets, and employing many people, such as Muhammadiyah Waqf (Nashir, 2015). An organisation cannot evolve or develop in a way that reflects only its members' or leaders' goals, motives, or needs. It must always be subject to its limitations by the nature of its relationship with the

environment (Child, 1972). At present, the waqf institution's main challenge is ensuring that this enormous treasure is preserved, developed, and continues to grow and contribute to the ummah's social and economic development. It can be fulfilled only by creating an enabling environment for waqf managers and *mutawallīs* and causing them to be transparent and accountable and strengthening their operations to fulfil their obligations to donors, beneficiaries, and all stakeholders (Hassana et al., 2020). Empirical studies also confirm the importance of the enabling environment. Mohd Thas Thaker (2018) found that regulatory support, governance, and stakeholder trust significantly influence the adoption and performance of the waqf crowdfunding model. Similarly, Afifi (2024) emphasised that aligning social missions with economic sustainability is crucial for waqf institutions operating in increasingly competitive environments. Ghani and Aziz (2023) further noted that the reduction in donor funds requires waqf institutions to diversify income sources and adapt to business-like strategies without compromising their social mandate. Within the hypothesis framework, these environmental enablers translate into Subjective Norms (SN), reflecting external pressures such as regulations and stakeholder expectations, and Perceived Behavioural Control (PBC), representing institutional capacity shaped by governance quality, regulatory frameworks, and infrastructural support. Thus, the environment shapes both social legitimacy and organisational capacity for waqf technology adoption.

ii. **Technology**

Technological advancement presents significant implications for designing an effective organisational structure (Child, 1972), such as Digital Assets Management (DAM). A DAM system comprises the infrastructure required to help processes effectively and efficiently utilise an organisation's digital assets. It includes automatically importing digital assets into an easily searched, documented, transformed, edited, packaged, and distributed centralised repository (Re Cecconi et al., 2020). A DAM system's main administrative functions include tracking utilisation, asset-

centred flow, automated system management, and asset rights and permissions (Fine & Johnson, 2005a). Many firms and institutions invest in technology infrastructure to gain a competitive edge for regulatory compliance. The waqf institutions should leverage information technology to manage waqf and communicate with stakeholders to ensure that they get effective and efficient information. Technology makes those who belong to the millennial generation do and understand waqf (Wadi & Nurzaman, 2020). Hence, waqf institutions are encouraged to create their corporate website where information such as the annual report, activities, asset management strategies, beneficiaries' identities, and the net value of waqf assets they administer is made available (Child, 1972). Several empirical studies support the role of technology in enhancing waqf performance. Mohsin (2019) demonstrated that waqfintech initiatives strengthen transparency and efficiency in waqf governance, leading to sustainable socio-economic impact. Almomani et al. (2024) identified both opportunities (digital platforms increasing accessibility and engagement) and challenges (limited infrastructure and digital literacy) in digital waqf management. Similarly, Alshanqiti (2021) in his study on digital waqf libraries revealed that technological adoption enhances knowledge dissemination and stakeholder trust. Arrasya and Muhtadi (2024) highlighted that digital media platforms are effective tools for waqf literacy, which indirectly support performance improvement by engaging younger donors and enhancing public awareness. In the hypothesis model, these technological elements correspond with Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Actual Use of Technology (AUT), and Intention to Use (IU). Moreover, Technology Legitimacy (TL) acts as a mediating factor, ensuring that digital solutions are not only adopted but also trusted, sharia-compliant, and institutionally accepted.

iii. **Measurement**

Waqf institutions are non-profit organisations, and they are formed to benefit society. Taylor (2017) defined performance as “the effective and efficient use of resources to achieve results and goals.” Also, there has

been an argument on measuring non-profit organisations' performance (Noordin et al., 2017), particularly for waqf institutions. Due to the complexity of measurement, organisations focus and emphasise their mission where achievement is difficult to measure. Performance measurements for non-profit organisations identified various perspectives that can be adopted in measuring and conceptualising the performance of the non-profit organisation, which are input, output, outcome, and network (Arshad et al., 2018). These perspectives offer valuable insight for waqf institutions to measure their performance based on non-financial measurements. In this context, financial and non-financial resources are being acquired and utilised efficiently to ensure sustainability and support the operation in achieving its objectives (Sukmana et al., 2024). Empirical literature strengthens this argument. Noordin et al. (2017) showed that performance evaluation in waqf requires a multidimensional approach including governance, accountability, and transparency indicators. Arshad et al. (2018) emphasised the importance of outcome-based and network-based measurements in capturing waqf effectiveness. Moreover, Afifi (2024) proposed the Waqf Business Model (WBM) as a framework integrating social value and financial sustainability, which can serve as a practical measurement tool for evaluating long-term waqf performance. In the hypothesis model, performance measurement is operationalised through Social-Business Integration (SBI), representing how waqf institutions merge economic and social objectives. Additionally, behavioural indicators such as AUT and IU serve as measurable proxies of technology-enabled performance outcomes.

The performance of waqf institutions is strongly shaped by three interrelated dimensions: the enabling environment that ensures governance, regulatory support, and sustainability; the role of technology in improving transparency, efficiency, and stakeholder engagement; and the use of measurement frameworks that combine financial and non-financial indicators to capture waqf outcomes effectively. The empirical evidence reviewed demonstrates that without a supportive environment (Thas Thaker, 2018; Afifi, 2024; Ghani & Aziz, 2023), technology adoption (Mohsin, 2019; Almomani et al., 2024; Alshantqi, 2021; Arrasya & Muhtadi, 2024), and

multidimensional measurement tools (Noordin et al., 2017; Arshad et al., 2018; Afifi, 2024; Sukmana et al., 2024), the sustainability and impact of waqf funds cannot be fully realised. These findings provide a solid foundation for developing the proposed research framework and for testing the hypotheses related to the factors influencing the legitimacy and performance of Muhammadiyah's Digital Socio-Business Waqf Model.

2.3.2 Management Attributes of Integrated Waqf Model

Developing effective integrated management systems is essential for waqf institutions to meet organisational objectives and equitably satisfy stakeholders (Dalling, 2007). As emphasised by Brandts and Cooper (2015), determining the proper structure and bureaucracy is crucial to facilitate decision-making and evaluation. In the integrated waqf model, five attributes constitute the foundation of waqf management: the waqif (founder), waqf property (al-mawquf), mutawalli (trustee or manager), beneficiaries (al-mawquf alihim), and nazir (supervisor) (Mohsin & Muneeza, 2020). These attributes can be categorised into management levels (Figure 2.5): mutawalli functions at the lower level by managing assets and distributing income in accordance with the waqif's stipulations; the nazir operates at the mid-level by supervising, guiding, and enforcing accountability mechanisms; while the central board represents the upper-level management, responsible for strategic decisions and the overall governance of waqf institutions. Once the levels are established, institutions must choose whether to adopt a centralised, decentralised, or hybrid bureaucratic structure, each influencing efficiency, transparency, and adaptability in practice.

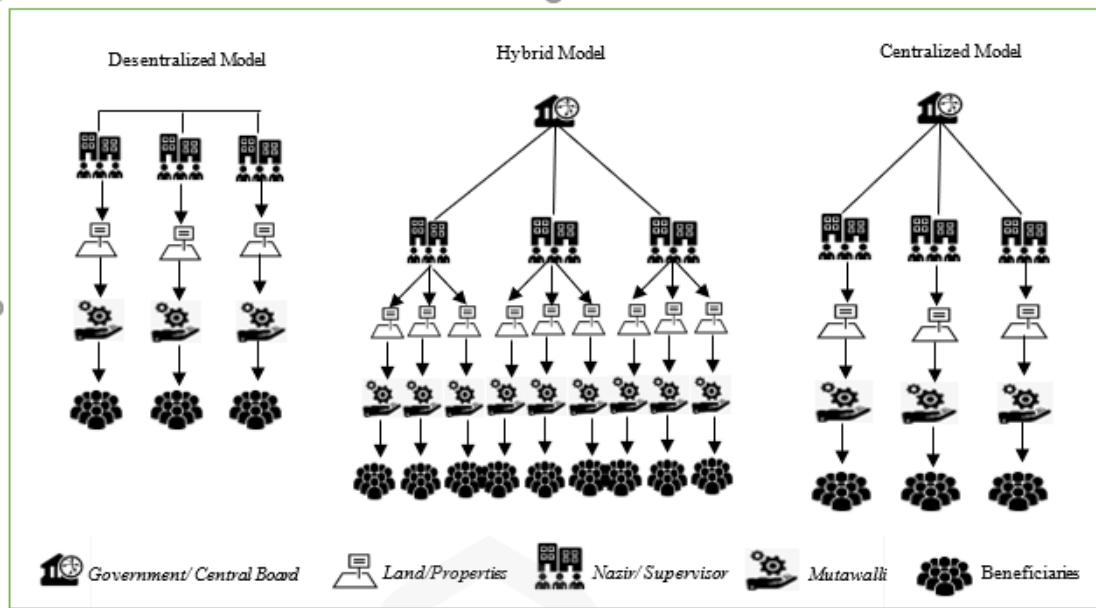


Figure 2.5 Management of Waqf Model

This multi-layered structure of waqf management aligns closely with Stakeholder Theory, which emphasises that organisational success and sustainability depend on the ability to manage and balance the diverse interests of stakeholders (Freeman & Phillips, 2005). In waqf institutions—particularly within Muhammadiyah, which manages extensive waqf assets—the stakeholders include the waqif, beneficiaries, mutawalli, nazir, government regulators, local communities, Islamic financial institutions, and religious organisations. Each stakeholder group carries distinct interests, levels of influence, and expectations. Mitchell et al. (1997) further highlight that stakeholders can be categorised based on power, legitimacy, and urgency, particularly relevant in waqf management. For instance, regulators exert significant power through legal frameworks, while beneficiaries represent urgency in fulfilling their social and economic needs.

The integration of waqf management attributes with stakeholder theory creates a dynamic governance framework. At the lower level, the mutawalli must balance operational efficiency with compliance with shariah and the expectations of waqif and beneficiaries. Nazir, at the mid-level, enforces accountability, ensuring legitimacy before regulators and communities. Meanwhile, the central board at the upper level must strategically navigate relationships with powerful stakeholders such as

governments, financial institutions, and large religious bodies like Muhammadiyah itself.

In the digital era, this integration becomes even more critical. The adoption of digital platforms for waqf management requires stakeholder acceptance and trust. Systems must be transparent and reliable for regulators, user-friendly for waqif, and accountable to beneficiaries. Here, stakeholder theory provides the lens for designing digital waqf systems that balance efficiency with inclusivity, ensuring no key stakeholder group is marginalised.

Furthermore, the trend of social-business integration in waqf management, which combines social objectives with business efficiency, also resonates with Stakeholder Theory. For example, while aggressive investment strategies may generate higher returns, they must align with shariah principles and remain acceptable to the Muslim community. Failure to balance these interests could undermine legitimacy. For Muhammadiyah, managing this complexity is particularly crucial, given its dual role as a religious organisation and as a large social enterprise manager. The sustainability of Muhammadiyah's waqf management thus depends on its ability to harmonise the voices of internal stakeholders (branches, schools, hospitals) with external stakeholders (government, society, and financial institutions).

Integrating the management attributes of waqf with Stakeholder Theory provides a comprehensive framework for governance. It ensures that waqf institutions not only manage assets effectively across different levels of management but also maintain legitimacy, transparency, and sustainability by addressing the diverse interests of stakeholders in a structured and adaptive manner.

2.3.3 Performance Measures of Integrated Waqf Model

The performance measurement framework for waqf, as illustrated in Figure 2.6 and detailed in Table 2.2, adopts an integrated waqf model that combines philanthropic, social, and productive dimensions in line with *maqasid al-shariah*. This model recognises that waqf institutions operate as charitable entities and social enterprises

whose efficiency, social effectiveness, sustainability, and growth must be systematically assessed (Arshad et al., 2018; Noordin et al., 2017)

The framework operates sequentially: **inputs, activities, outputs, outcomes, and impacts**. Inputs represent the resources entrusted to waqf institutions, encompassing tangible assets such as cash, real properties, and equipment and intangible assets such as knowledge, reputation, and technical expertise. These resources are mobilised into activities, including providing basic needs, developing infrastructure, delivering microfinance services, awarding scholarships, sponsoring social programs, and engaging in religious and community development initiatives.

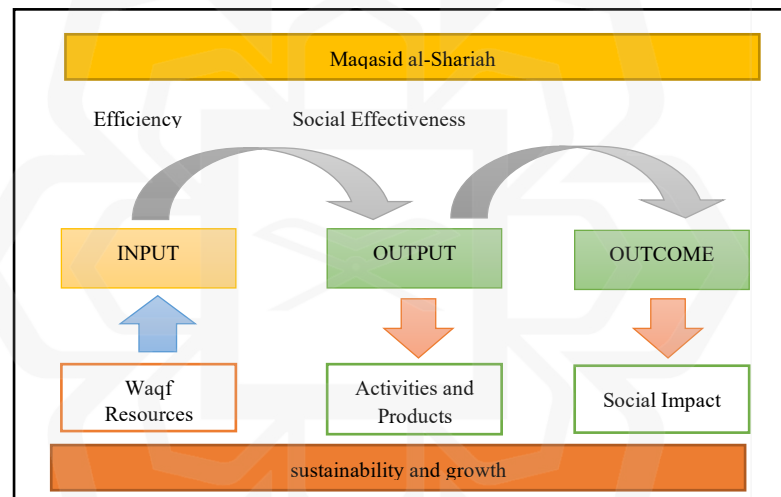


Figure 2.6 Framework for Measuring Waqf Performance

The immediate results of these activities are captured as outputs, such as the number of people fed, sheltered, or treated; the construction of mosques, hospitals, and schools; or the establishment of microenterprises. Outcomes, in contrast, refer to the medium- to long-term effects, including improved living standards, enhanced health conditions, expanded access to education, and strengthening Muslim community cohesion. At the highest level, impacts denote the sustained transformative changes that address root causes of socio-economic disparity, such as poverty alleviation, fairer income distribution, the widespread practice of Islam, and the realisation of Islamic economic objectives.

However, it is important to note that not all inputs directly translate into outcomes. Some resources, particularly intangible ones such as trust, reputation, or organisational expertise, may not produce measurable results in the short term but serve as enablers that strengthen institutional credibility, ensure continuity, and foster long-term sustainability. For instance, while knowledge and technical expertise may not immediately improve income distribution, they build capacity and legitimacy for waqf institutions, enabling them to deliver more impactful outcomes in the future.

Table 2.1 Logic Model of Organisational Results for Waqf Institutions

Inputs What goes in	Activities What happens – Outputs	Outputs What results – immediate	Outcomes What results – sustained medium and long-term	Impacts What results – effects on root causes; sustained significant changes
Cash	Delivery of basic needs, e.g., food, shelter, and medical supplies	People fed, treated, and sheltered	Improved living standards, health, etc.	Constant declines in poverty
Real Properties	Construction of mosque, cemetery, road, and hospital	Infrastructure and hospitality were built	Increased income	Islam is widespread around the world
Equipment and Supplies	Provision of microfinance	Microenterprises formed		Fair income distribution (the reduced gap between rich and poor)
Knowledge (modern and Islamic)	Awarding scholarships and research	People are trained and educated	Expansion of the Muslim community	Significant social norms and attributes exist, such as social justice, freedom, governance, transparency, etc.

Inputs What goes in	Activities What happens – Outputs	Outputs What results – immediate	Outcomes What results – sustained medium and long-term	Impacts What results – effects on root causes; sustained significant changes
Technical expertise	Sponsoring disabled, orphans, and refugees	Religious activities held		Strong Muslim Brotherhood
	<ul style="list-style-type: none"> • Disaster and accident relief • Conducting training and educational programs • There are sponsoring religious activities, e.g., da'wah, Islamic forum, etc. 			Achieving the objectives of the Islamic economic system

This comprehensive framework highlights that performance measurement in waqf institutions must go beyond traditional financial metrics and integrate worldly and spiritual dimensions. By embedding efficiency, social effectiveness, maqasid al-shariah, sustainability, and growth into the assessment, waqf managers are better equipped to make informed decisions that balance material well-being with the spiritual mission of serving Allah. Such an approach ensures that waqf is preserved and optimised as a transformative instrument for social and economic development.

From a theoretical perspective, this framework draws on several important foundations. The Input–Output Model (Kendall & Knapp, 2000) provides the logical structure by linking resources to activities and their resulting benefits. Stakeholder Theory (Freeman, 1984) justifies the inclusion of multiple beneficiaries—donors, communities, governments, and society at large—in assessing the value created by waqf institutions. Furthermore, the Maqasid al-Shariah framework (Dusuki & Abdullah, 2007; Chapra, 2008) ensures that the assessment of efficiency and effectiveness is not limited to material outcomes but also considers spiritual and moral objectives, such as

social justice, equity, and communal well-being. Finally, principles of Sustainability Theory (Elkington, 1997) emphasise the balance between economic, social, and environmental dimensions, which is highly relevant for ensuring that waqf institutions generate long-term and inclusive benefits.

2.4 DEVELOPMENT OF WAQF MANAGEMENT

The development of waqf management reflects social, economic, and technological evolution in Muslim society. From a simple practice during the Prophet Muhammad SAW and his companions, waqf management has significantly transformed in the contemporary era. In the early days of Islam, waqf was managed directly by individuals appointed by the wakif, primarily focusing on immovable assets such as land and buildings. This management model became the foundation for the development of waqf in the following years (Kahf, 1999; Mohsin et al., 2016)

Along with the expansion of Islamic civilisation, waqf management began to experience institutionalisation. During the Islamic dynasties, such as the Umayyad and Abbasid, special institutions began to manage waqf, known as diwan al-ahbas. This period was marked by the development of a more structured administrative system and the emergence of various forms of waqf, including cash waqf. The state's role in waqf supervision also began to increase, marking the beginning of the formalisation of waqf management within Islamic government structures (Cizacka, 2013). The colonial era brought its challenges to waqf management. Many waqf assets were taken over by the colonial government, causing a decline in management and public confidence in the effectiveness of waqf institutions. However, this phase was also a turning point that encouraged efforts to revitalise waqf in various Muslim countries at the beginning of the modern era. Establishing a waqf ministry or body at the national level and efforts to codify waqf law marked the start of a new era in waqf management that was more organised and legally recognised (Sait & Lim, 2006).

The contemporary era brings a breath of fresh air to waqf management with the inclusion of modern management principles. The professionalisation of waqf management is characterised by increased transparency, accountability, and the use of

information technology. Financial innovation has also coloured the development of waqf, with the emergence of capital market-based waqf instruments and the integration of waqf with shariah financial institutions. The concept of productive waqf and corporatisation of waqf is starting to receive attention, encouraging waqf management with a business approach focusing on sustainability and asset growth (Kahf, 2003a).

Internationalisation and digitalisation are the latest trends in the development of waqf management. Establishing international waqf institutions and cross-border collaboration opens opportunities for the standardisation of waqf practices at the global level. Meanwhile, the digital revolution brought waqf into a new era with crowdfunding platforms, the implementation of blockchain for transparency, and the development of mobile applications for ease of waqf.

- i. Professionalisation of Management (Mohaiyadin et al., 2022a)
 - a. Application of modern management principles in waqf management.
 - b. Increased transparency and accountability.
 - c. Use of information technology in waqf administration.
- ii. Financial Innovation (Mohsin et al., 2016)
 - a. Development of capital market-based waqf instruments.
 - b. Integration of waqf with shariah financial institutions.
 - c. The emergence of waqf sukuk and share waqf.
- iii. Corporatisation of Waqf (Alias, 2014)
 - a. Formation of a waqf corporation (waqf corporation).
 - b. Waqf management with a business approach.
 - c. Focus on the sustainability and growth of waqf assets.
- iv. Internationalisation of Waqf (Oseni & Ali, 2021)
 - a. Establishment of international waqf institutions.
 - b. Cross-country cooperation in developing waqf.
 - c. Standardisation of waqf practices at the global level.

- v. Digitalisation of Waqf (Ibrahim et al., 2013; Mohd Thas Thaker et al., 2018)
 - a. Use of crowdfunding platforms to collect waqf.
 - b. Blockchain implementation in waqf management and transparency.
 - c. Development of mobile apps to facilitate waqf donations.

However, waqf management in the modern era is not free from challenges. Harmonising waqf law with the modern legal system, increasing waqf literacy in society, and developing professional human resources in waqf management are crucial issues that must be addressed. Amid this complexity, the main challenge is optimising the potential of waqf as an instrument of socio-economic development while maintaining its spiritual essence as a form of worship in Islam.

The development of waqf management over time shows the flexibility and adaptability of this institution in responding to changing times. From a simple form in the early days of Islam to a complex social and financial instrument in the digital era, waqf continues to prove its relevance as a solution to various socio-economic challenges of the community. In the future, innovation in waqf management is expected to expand its positive impact further while still adhering to the fundamental values that have been the foundation of waqf institutions since their inception.

2.4.1 Traditional Method Waqf Management

The traditional method of management of waqf reflects practices that have been taking place from the early days of Islam to the pre-modern era. This approach is based on the interpretation of classic Islamic law and the conditions of socio-economic Muslim society at that time. One of the main traditional methods is the appointment of a nazir (manager of the waqf) directly by the wakif (giver of endowments). This Nazir is often a family member or a Wakif's trusted person. This practice is based on hadith and the practice of Companions, as Umar bin Khattab did when endowing his land in Khaibar. As narrated in Sahih al-Bukhari, Umar pointed out himself alone as a manager of waqf during his life (Al-Bukhari, Sahih al-Bukhari).

Management of waqf was traditionally more focused on non-moveable assets, such as land and buildings. This matter aligns with understanding the beginning of the condition of immortality (*ta'bid*) in waqf. Ibn Qudamah in *Al-Mughni* emphasised the importance of a characteristic permanent from object waqf, stating that waqf is only valid on objects that can be utilised while still maintaining substance (Ibn Qudamah, *Al-Mughni*). Waqf assets are generally used directly for a designated destination, such as a mosque for worship or land for burial. Management is more naturally passive, focusing on maintenance assets rather than their development. Monzer Kahf explained that traditional management waqf tends to be conservative and more important in preserving assets than developing productivity (Kahf, 2003b).

System recording and administration of waqf in traditional methods are still very simple and often depend on a written document or verbal testimony. Al-Khassaf in *Ahkam al-Awqaf* explained the practice of recording waqf in the early days of Islam, where testimonies and written documents became proof of the existence of waqf (Al-Kassaf, *Ahkam al-Awqaf*). Supervision of management of waqf, more Lots carried out by the community, local and based trust. Murat Çizakça notes that the role of qadhi (judge) in supervision of waqf started to increase during the early Islamic dynasties, marking the beginning of the formalisation of supervision of waqf (Cizacka, 2013).

Traditional methods tend to limit development or change from asset waqf based on the principle that asset waqf cannot be sold or changed. Imam Shafi'i, for example, was very strict in this matter, stating in *Al-Umm* that an assets waqf cannot be sold, given away, or inherited (Al-Shafi'i, *Al-Umm*). Management Waqf is strongly influenced by the schools of thought that dominate Fiqh in a region. Different interpretations between sects can influence the practice management of waqf, as explained by Sait and Lim in their comprehensive study on Islamic land tenure systems (Sait & Lim, 2006). Despite the traditional excess in matter simplicity and suitability with practice, early Islam also faced challenges in facing a complex modern economy. Timur Kuran argues that rigidity in using waqf funds often becomes an obstacle in optimising potential in the modern era (Kuran, 2001). However, the principles based on traditional methods, like Nazir's trust and integrity, remain relevant and have become the foundation for the development of a more modern method of management.

2.4.2 Challenges in Managing Conventional Waqf

Although management is conventional and has taken place for centuries, it faces many challenges in the modern era. This appears due to various factors, including socioeconomics, development technology, and demands for efficiency and transparency. The following is the description of the main challenges in the management of the waqf conventional:

i. Limitations in Asset Development

One of the main challenges is the rigid interpretation of the principle of eternity or perpetuity (*tabid*) of waqf, which emphasises the eternity of waqf to provide sustainable charitable benefits to society. Monzer Kahf explained that understanding traditional eternity waqf often gets in the way of effort for optimising the use of asset waqf (Kahf, 2003b). Limitations can result in the asset waqf becoming unproductive or even abandoned.

ii. Lack of Professionalism in Management

Appointment of nazir (manager waqf), which is frequently based on relationships, family, or personal closeness, can lead to problems in professionalism. Habib Ahmed highlighted that the lack of skills in modern management among traditional Nazirs has become a serious obstacle to waqf development (Ahmed, 2004)

iii. Limited Transparency and Accountability

Simple system recording and reporting in management waqf are conventional and often do not fulfil standard modern transparency and accountability. According to Mohaiyadin, system waqf reporting and auditing limitations can reduce public trust in the institution waqf (Mohaiyadin et al., 2022a).

iv. Inflexibility in the Use of Funds

Stringent interpretation of waqf requirements often prevents waqf funds from adapting to a changing society. Timur Kuran argued that inflexibility in waqf funds can reduce the social relevance of the institution of waqf (Kuran, 2001).

v. Limitations Sources of Funds

Excessive focus on Waqf assets. There is no move to limit participation public-wide in the endowment. Magda Ismail Abdel Mohsin explained that the limitations of the Waqf convention reduce the potency of mobilising Waqf funds from various layers of society (Mohsin, 2013).

vi. Legal and Regulatory Challenges

Nonconformity between traditional and modern law often gives rise to legal issues. Sait and Lim observed that the conflict between the law of waqf and the national law in many Muslim countries became an obstacle to waqf development (Sait & Lim, 2006).

vii. Lack of Integration with Modern Economic Systems

Management of waqf is often isolated from the system of mainstream finance and economics. Çizakça's opined that isolation from the modern economic system hinders its potential to contribute significantly to economic development (Cizakça, 2013).

viii. Resistance to Innovation

Reluctance to adopt new methods and technology in management can hinder efficiency and effectiveness. Stiles and Karbhari noted that resistance to innovation in management waqf is often rooted in an interpretation conservative to law waqf (Stiles et al., 2006).

The challenges show the need for reform and innovation in Waqf management. Although waqf's values, basis, and goals are still relevant, its management method must adapt to the modern context. As Oseni and Ali (2021) stated, "Modernisation waqf management is key for maximising potency waqf in development socio-economic contemporary Muslims."

Hence, a strong felt need requires a holistic system approach involving legal reform. This need requires a holistic approach involving legal reform, improvement in capacity management, adoption of modern technology, and a change in paradigm in understanding flexibility waqf while still maintaining its essence and fundamental values as an institution of Islamic philanthropy.

2.4.3 Modernisation and Innovation in Waqf Management

The need for modernisation and innovation in the management of waqf has become more urgent in the contemporary era, driven by the complex global economy and rapid social change. Modernisation is required to optimise waqf potency as an effective and socio-economically sustainable development institution and/or instrument. One of the main reasons for modernisation is waqf management professionalisation. Habib Ahmed emphasised that increasing professionalism in the management of the waqf is key to increasing the efficiency and effectiveness of the waqf institution (Ahmed, 2004). This involves the development of a power source, competent humans, implementation principles of modern management, and the use of technological information in the administration of the waqf.

Innovation in the instrument waqf also becomes urgent. Mohsin (2013) believed that new development instruments, such as waqf cash and shares, expand the public's participation in waqf. Innovation not only increases accessibility to waqf for various layers of society but also opens opportunities for the diversification of investment waqf. Utilising digital technology to manage waqf has become more important. Muneeza et al. (2018) highlighted that adopting blockchain technology and crowdfunding platforms could increase transparency and efficiency in the collection and distribution of waqf funds. The need for integration of waqf with modern finance

is also increasing. Mohsin et al. (2016) believed that synergy between waqf and instruments of modern shariah finance can open up potential in economic empowerment, including the waqf development, sukuk and waqf integration with shariah microfinance.

Modernisation is also needed in the aspects of waqf regulation and governance. Harmonising law waqf with a modern law framework for facilitating development dynamic waqf (Sait & Lim, 2006) involves legal reform and possible waqf flexibility in the management of asset waqf. Innovation in impact measurement and waqf performance reporting has also become important. Mohaiyadin et al. (2022) state that development metrics and comprehensive systems reporting are key for increasing the accountability and trust of the public in waqf institutions. This involves the adoption of standard international reporting and development indicators relevant to waqf performance.

Furthermore, the need to approach collaborative and cross-sectoral management of the waqf is also increasingly acknowledged. (Rusydiana et al., 2023) argued that partnerships between waqf institutions, government, private sector, and non-profit organisations could increase the impact of waqf socio-economic. Approach this possible synergy source, power and expertise to maximise the benefit of the waqf.

Lastly, the Modernisation of education and literacy is crucial for revitalising waqf (Morse & Buss, 2014; Nugraha et al., 2022). This includes raising public awareness of waqf's potential and flexibility through broad education campaigns and integrating modern waqf concepts into educational curricula. While waqf management must adapt to contemporary challenges through modernisation and innovation, preserving its fundamental principles as an Islamic philanthropic institution is essential. Waqf innovation should bridge traditional values and modern needs, ensuring its essence as a sustainable charity remains (Afifi, 2024a). Therefore, a balance must be struck between preserving the waqf's identity and embracing technological and financial innovation.

2.5 MANAGEMENT INFORMATION SYSTEM

Management Information System (MIS) is a dynamic IT-based system that needs to be periodically reviewed and modified according to the changing environment (James, 2017). MIS, a set of integrated technologies, involves collecting, processing, storing, retrieving, and communicating relevant information for efficient management operations and business planning for any organisation (Al-Mamary & Shamsuddin, 2013). It also supports decision-making and control (Gorry & Morton, 1971). The management information system comprises procedures, people, communication, data, hardware, and software (James, 2017). All these components must be integrated to achieve business objectives.

On the other hand, the organisation faces renewal issues when adopting designated information systems (Gorry & Morton, 1971). *Firstly*, the cost factor and the time are the information systems that must be developed, installed, and updated. So, organisations must implement new technology in a timely and effective manner, leading to optimised deployment with efficient costs for information systems. *Secondly*, employees should be aware of all information system changes affecting the different divisions and communicate properly, promptly, and effectively on the company website and communication channels. They should be able to articulate and derive benefits from information systems in competitive settings within changing business environments; otherwise, it will be difficult for the organisation to survive and sustain in the technological innovation in the market. Any significant system anomaly or failure may affect employees' confidence and trust. Thus, they may refuse to use new technology due to frequent server and website crashes, leading to a loss of information. For information systems' success, proper planning must include constructing technology management or adoption because project harmony and uniformity in the organisation are also required.

2.5.1 Technology Management

Management technology leverages human resources, technology, and other business assets by optimising the relationships between the organisation's functions (Powell & Dent-Micallef, 1997). Successful use of technology can offer many competitive advantages, so organisations become more aware of the value of technology when applied to their business. Today, the environment is changing rapidly with increasing costs, complexity, competition, and the pace of technological change (Rip & Kemp, 1998). The need for technology management has become a pressing problem for every company and organisation (Mondolo, 2022). It also requires effective technology management at the national and corporate levels. As a result, technology management now occupies an essential role in the decision-making stage (Shim et al., 2002).

An interesting paper by Banalieva and Dhanaraj (2019) discussed the digital service multinational enterprises (SMNCs), how digitalisation alters internalisation theory's assumptions about the nature of firm-specific assets (FSAs), and predictions about governance in cross-border transactions. Based on the literature review, this research emphasises that the technology and human capital FSAs lead to different governance modes. The network is becoming famous as an independent governance mode. Depending on the criticality of the core or peripheral technology, the network can become centrally controlled. Similarly, depending on the composition of advanced or generic human capital, there is increased internalisation or externalisation of skills. Thus, this study extends to other special issues and elaborates on conditions under which MNCs externalise their activities across the value chain (Banalieva & Dhanaraj, 2019). MNCs become digitally networked orchestrators of their subsidiaries across countries and their global ecosystem partners, specialising in connecting buyers with sellers instantaneously through digital platforms. In 2023, a paper titled "Digital Technology-Enabled Governance for Sustainability in Global Value Chains: A Framework and Future Research Agenda" reviews how digital technologies can improve governance mechanisms in global value chains, especially regarding sustainability (Wang, 2023). The study proposed various digital technology-enabled governance mechanisms to overcome traditional control and coordination limitations, enabling MNCs to maintain sustainable practices in their global value chains.

Muhammadiyah faces a decision dilemma regarding implementing a centralised or decentralised administrative system. Technology can enable authenticity whilst allowing flexibility and hence solve this problem so that waqf management will be more proper and adequate to divide the level of a centralised system. The Digital network of their subsidiaries across countries and their global ecosystem partners specialises in connecting all parties instantaneously via digital platforms (Banalieva & Dhanaraj, 2019; Wang, 2023).

2.5.2 Technology Adoption Model

A new model's development combines and integrates pre-existing models, namely, the technology acceptance model (TAM) and the information technology adoption model. The model is implemented using IPO logic (input-process-output) and a causal model by adopting the previous model. The TAM developed by Davis is one of the most influential research models in studying the determination to accept systems and information technology to predict organisations' intention to use and adopt information systems and information technology (Al-Mamary & Shamsuddin, 2013). TAM combines two relevant trust variables and represents the primary drivers of users' acceptance of new information technology: perceived usefulness and ease of use (Davis, 1993a). Some believe using a particular system would enhance their job performance, and a specific approach would be free from effort. The crowdfunding-waqf model (CWM), which adopted the technology acceptance model (TAM), positively impacts the behaviour intention of crowdfunders or donors in assisting waqf institutions (Mohd Thas Thaker et al., 2018). On the other hand, the challenge in technology adoption is that the generic model must be adapted to Crowdfunding needs and conditions (Parente & Prescott, 1994).

Mohd Thas Thaker (2018) developed CWM to help waqf institutions source alternative financing in developing waqf land through crowdfunding. The author uses primary data collected from the survey and analysed using Partial Least Squares (PLS). The model adopts the Technology Acceptance Model (TAM) theory and validates its acceptance. The results emphasise that the crowd funder's intention and readiness to accept CWM as an alternative source of financing for waqf institutions to develop waqf

land is significant. So, it is necessary to coordinate government agencies and other policymakers to support waqf institutions by implementing the proposed CWM. For example, the government can provide incentives for funders, encourage private companies or government-linked companies to participate in the CSR model, and play a role in facilitating collaboration between CWM and relevant authorities such as CFPs and investors (Mohd Thas Thaker et al., 2018).

Amin et al. (2014) explored the factors influencing online waqf acceptance, generally termed Islamic e-donations in Malaysia. The technology acceptance model (TAM) was used as a baseline theory. In addition, a questionnaire survey was conducted. The study data were analysed using the Partial Least Squares (PLS) approach. This research emphasises that perceived usefulness, ease of use, religiosity, and much information influence one's decision to perform online waqf.

- i. Perceived Usefulness: The belief that online waqf platforms will enhance donors' ability to contribute effectively and conveniently.
- ii. Perceived Ease of Use: The extent to which donors find the online waqf platforms simple and user-friendly, affecting their willingness to adopt the technology.
- iii. Perceived Religiosity: The degree of personal religious commitment is crucial in motivating individuals to participate in online waqf.
- iv. Amount of Information: Access to clear, sufficient, and accurate information on waqf platforms influences users' decisions to donate through online channels.

The diffusion of innovation theory proposed by Rogers et al. (2019) also provides an important perspective on understanding the technology adoption process in management. Rogers identified five stages in the adoption process of innovation: knowledge, persuasion, decision, implementation, and confirmation. In the context of Muhammadiyah, understanding stages can help design practical strategies for introducing and implementing new technology in system management. Application

technology in management waqf must also be considered, considering the characteristics unique to the institution waqf and shariah principles. For example, blockchain technology is becoming increasingly popular. To increase transparency and efficiency, management of waqf must be appropriately implemented, following shariah principles, and can be accepted by various waqf stakeholders.

Factors contextual, such as infrastructure, available technology, digital skills of managers, and culture, also play an important role in adopting technology. Muhammadiyah, as a big organisation with a complex structure, perhaps faces a unique challenge in adopting new technology in a way that is evenly distributed throughout its branches and charities in its business. Adopting technology in management waqf is about implementing a new system and transforming the organisation's process and culture. This is possible by involving a change in the Nazir working method, how information is shared with stakeholders, and how decisions are made. Therefore, approaching the holistic consideration of technology, people, and organisation is crucial for successfully adopting technology in management waqf.

This study's results could significantly extend current knowledge on technology acceptance and online waqf. Furthermore, the effects propagate valuable insights for Islamic banking institutions to introduce online waqf in the future. The factors analysed could be used as a guideline for better planning and implementing online waqf (Amin et al., 2014). Muhammadiyah's organisational culture prioritises social benefits in managing its assets or waqf. Therefore, it is necessary to conduct a study related to the organisational behaviour of Muhammadiyah. TAM adopted TRA from Fishben (1976), which is used to see respondents' use of receiving information technology. Davis (1989) formulated the original TAM construction by considering the various factors that affect it, namely the theory of planned behaviour (TPB): perceived usefulness, perceived ease of use, attitude, behavioural intention, actual use, and external perspective (experience and complexity). These will be considered in the study.

2.5.3 Types of Technology Used in Waqf Management

Technology is a key catalyst for transforming and modernising waqf institutions (Hassan et al., 2018). Its integration significantly improves waqf management's efficiency, transparency, and reach. Digitalising administration and management systems, such as through waqf management information systems, enhances efficiency and asset monitoring by enabling more accurate record-keeping, better asset tracking, and more transparent reporting (Gorry & Morton, 1971). Several technologies are transforming waqf management. Blockchain enhances transparency and trust by creating immutable transaction records (Mohaiyadin et al., 2022a; Muneeza et al., 2018). Crowdfunding platforms broaden participation and increase funding volume (Mohd Thas Thaker et al., 2018; Mohsin, 2013). Big data and predictive analytics optimise management decisions for better investment and distribution (Bradlow et al., 2017). AI and machine learning improve investment returns and risk management (Agaileh, 2024). Finally, technology facilitates waqf's integration with modern finance, enabling innovative products like digitalised zakat and waqf and opening access to capital markets.

While technology offers significant advantages to waqf management, its adoption also presents challenges. Abdullah (2018) cautioned that technology use must align with shariah principles and waqf's social objectives, including data security, privacy, and regulatory compliance (Adytia et al., 2024). Neches et al. (1991) highlighted the need for knowledge sharing or capacity building through training and development to maximise technology's benefits. Integrating technology represents a significant paradigm shift, increasing efficiency and fostering innovation. However, balancing technological advancement with the waqf's core values is crucial. Technology should strengthen, not replace, the essence of social and spiritual endowments, as exemplified by the Muhammadiyah case.

2.6 LEGITIMISING TECHNOLOGY USE IN WAQF MANAGEMENT

Legitimacy Theory, developed by Mark C. Suchman in 1995, provides a valuable framework for understanding how organisations acquire and maintain social reception. In the context of management waqf by the Muhammadiyah Organisation, the theory offers a profound perspective on how institutional waqf can build and maintain trust in society, especially when adopting technology and integrating approaches to social business. Suchman (1995) defined legitimacy as the general perception that the action of something entity is desired, appropriate, or under a system of norms, values, and beliefs that are built socially. In management waqf, this means that the practices implemented must be effective in a way that is operationally accepted and viewed as appropriate to society, especially Muslims, who are becoming more interested. This theory identifies three main types of legitimacy:

- i. Legitimacy is pragmatic and related to benefits provided directly by the organisation in the holder's interests. In the context of waqf, it can form a beneficial economy or be perceived as social by the community.
- ii. Moral legitimacy evaluates normative, positive effects on activity organisation, which is profound. This is closely related to the suitability of practice management waqf with shariah principles and Islamic values.
- iii. Legitimacy cognitive is the most difficult to achieve but the most long-lasting, involving reception organisation as Necessary and non-necessary entities inevitably in the social landscape.

Organisation managers like Muhammadiyah can apply various strategies to acquire and maintain legitimacy. This includes adapting practice with a positive environment (conformity), choosing a supportive environment (selection), or even trying to change the expectation environment (manipulation). Application technology in management waqf, for example, can be seen as an effort to adapt itself with the hope that modern society will be efficient and transparent. However, adopting technology and an integration approach in social business can also challenge legitimacy. Organisations must balance innovation with tradition, ensuring that changes made are

not considered to deviate from principles based on waqf. Transparency and accountability become key to building and maintaining legitimacy, especially when applying new practices.

Daud (2019) examined accountability and legitimacy in the context of waqf in Malaysia, showing the importance of good governance in building trust in the public and the digital era. However, it is important to remember that legitimacy theory has boundaries, especially in the context of religious organisations such as the manager waqf. Spiritual aspects and values of religion are possible but not fully covered in framework theory, which focuses more on society's perception and acceptance. Therefore, to apply legitimacy theory deeply, one also needs to consider spiritual dimensions and the unique religion of the context. By understanding and applying the principles of Legitimacy Theory, organisations such as Muhammadiyah can more effectively build public trust, adopt innovative technology, and integrate a social-business approach in management waqf while still maintaining integrity and values.

2.6.1 Islamic Law Perspective

In the ever-evolving digital era, technology has permeated various aspects of life, including managing religious institutions such as waqf. Waqf, one of the instruments of Islamic philanthropy that has existed since the time of the Prophet Muhammad SAW, is now facing new challenges and opportunities with modern technology. The question is how Islamic law views technology integration in managing waqf, which is traditionally governed by sharia principles.

The perspective of Islamic law on the use of technology in the management of waqf cannot be separated from the fundamental principles of sharia and the legal reasoning methods of Islamic law. Through various approaches, ranging from *maqasid al-sharia*, *maslahah*, *qiyas*, and contemporary *ijtihad* to the concept of 'urf,' contemporary Muslim scholars have tried to provide a strong legal foundation for the modernisation of waqf management.

It must be understood that Islamic law's flexibility allows adaptation to the times as long as it does not contradict its basic principles. Using technology in waqf is seen as an innovation and a means to achieve broader shariah goals, especially in protecting and optimising waqf assets for the benefit of the people.

i. Principles of Maqasid al-Shariah

The use of technology in managing waqf can be studied through the perspective of maqasid al-shariah (goals of sharia). Abdullah (2018) argued that implementing technology aligns with the principle of *hifz al-mal* (protection of assets), one of shariah's five goals. Technology can help protect and optimise asset waqf, supporting the objective.

ii. Principle of *Maslahah* (Benefits)

Using technology in Waqf can be seen as an embodiment principle. It matters if technology increases efficiency, transparency, and accountability in Waqf management (Dafterdar & Bank, 2009). This benefits people and is therefore in line with shariah goals.

iii. Qiyas (Analogy)

Some scholars use the qiyas method to legitimise the use of technology in waqf. They analogise the use of modern technology with innovation administration introduced during the Khulafa ar Rasyidin period, especially during the time of Umar bin Khattab, who noted transaction waqf (Kahf, 2003b)

iv. Contemporary Ijtihad

Many contemporary scholars carry out ijtihad to accommodate development technology in fiqh waqf. The opinion is that, in essence and purpose, waqf cannot change, and its management method can be customised with current development (Mohsin et al., 2016).

v. **Principle of ‘Urf (Habit)**

Technology use in various aspects of life, including transaction finance, has become ‘urf (habit) in modern society (Musarrofa & Rohman, 2023). In Islamic law, ‘urf is not contradictory with sharia. It can make a legal consideration law.

vi. **Flexibility of Islamic Law**

Perspective Islamic law regarding the use of technology in waqf also reflects shariah flexibility in the face of changing times. This matter is under the rule of fiqh (Quraishi & Kamali, 2000): “*Taghayyur al-ahkam bi taghayyur al-azman wa al-amkan*” (change in law happens along with change of time and place).

Outline perspective: Islamic law generally supports the use of technology in the management of waqf if its implementation does not violate the principles of shariah law and is proven to benefit the management of waqf and people in general.

2.6.2 Fatwas on Modernisation of Waqf Management

Fatwa, as a product of scholars’ ijthad in responding to contemporary issues, bridges the gap between the traditional principles of waqf and the demands of modern efficiency. Institutions such as the Indonesian Ulema Council (MUI), the National Sharia Council (DSN), and international fatwa bodies such as the International Islamic Fiqh Academy (IIFA) and the Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI) have issued various fatwas discussing aspects of waqf modernisation.

- i. The Fatwa of the Indonesian Ulema Council (MUI) has issued several related fatwas on modernisation waqf, including:

- a. Fatwa No. 24 of 2017 concerning Laws and Guidelines Make peace Through social media, which does not directly legitimise technology information in the management of waqf.
 - b. Fatwa No. 106/DSN-MUI/X/2016 concerning Waqf Insurance Benefits and Investment Benefits in Sharia Life Insurance shows flexibility in the forms of new waqf.
- ii. The National Sharia Council (DSN) has also issued relevant fatwas with modernisation waqf, such as:
- a. Fatwa No. 94/DSN-MUI/IV/2014 concerning the Repurchase Agreement (Repo) for Sharia Securities (SBS), which can be obtained and applied in the management of asset waqf.
- iii. International Fatwa:
- a. Academy International Islamic Fiqh (IIFA), in resolution no. 181 (19/7) of 2009 states that using modern technology in documentation and management is allowed and even recommended to increase efficiency.
- iv. Contemporary Ulama Opinions:
- a. Sheikh Yusuf Al-Qaradawi, in his book *Fiqh al-Zakah* (2011), supports using modern methods in managing waqf without violating sharia principles (Al-Qardawi, 2002).
 - b. Dr. Monzer Kahf, an expert in Islamic economics, has pushed innovation in management waqf, including modern technology and business models, in various writings (Kahf, 2003b).

v. Regional Fatwa Institute Fatwa:

The United Arab Emirates Fatwa Council 2018 issued a fatwa allowing it to waqf money and investments through digital platforms, opening the road for deep fintech management.

vi. International Conference and Seminar Results:

- a. The International Waqf Conference in Mecca (2019) recommended adopting blockchain technology in the management and transparency of waqf.

vii. Financial Institution Fatwa:

- a. Some Islamic finance institutions have issued supportive internal fatwas on using technology in managing waqf, such as the fatwa of the Sharia Board of Bank Islam Malaysia Berhad about waqf shares.

The fatwas and opinions of these scholars generally show an openness to modernisation management of waqf, with conditions still guarding the essence and purpose of waqf according to shariah. They emphasise the importance of utilising technology and innovation to increase efficiency, transparency, and socio-economic waqf.

2.7 SOCIAL-BUSINESS INTEGRATION

Social business is a model predicated on addressing social problems in a financially self-sustaining way, achieved through revenue generation from selling products and services (Hysa et al., 2018). However, the very nature of social business is still debated, encompassing innovative social value creation by organisations across the public, private, civic, and hybrid sectors (Ogliastri et al., 2015). Yunus (2023) emphasised that Social Business is a non-loss, non-dividend company primarily for social purposes and is classified into two types. Type I is owned by investors who reinvest all their profits

to develop and improve the business. Company owners and investors do not get personal benefits from the business, such as from TOMS Shoes. Meanwhile, Type II is a business owned by low-income people or a non-profit organisation. Profits that flow to people experiencing poverty or institutions are for their sustainability and improving their living standard, thus reducing poverty, such as the Grameen Group.

Waqf, an Islamic philanthropic institution that has survived for centuries, is now facing new challenges in the modern era. Changes in socio-economic dynamics, globalisation, and technological developments have created the need for a more innovative approach to managing waqf assets. In this context, social-business integration in waqf management emerges as a promising new paradigm. The social-business integration in waqf management is an innovative approach that combines business principles with waqf's social objectives to ensure financial poverty and maximum social impact. This approach allows the management of waqf assets to be more dynamic and sustainable by utilising socio-business models such as Type II, where profits are used to reduce poverty and improve community welfare. Thus, this integration creates a waqf management model that aligns more with the challenges of the modern era. This concept can also be applied to non-profit organisations. Muhammadiyah, as a non-profit organisation (NPO) (Mu'thi et al., 2015), manages the assets and waqf through a social approach (Nashir, 2015).

2.7.1 Business Integration Concept

Draft integration of social business in management waqf is an approach that bridges objective philanthropist waqf with principles of modern business management. Kasri and Ismail (2021) define this approach as a holistic strategy that combines practice management business with objective social waqf and aims to optimise the impact and sustainability of the waqf institution. This appears to respond to institutions' challenges, such as the lack of efficiency and productivity assets.

Within social business integration, management is not limited to the preservation of assets only but is development-oriented, productive, and investment-strategic. Kahf (1999) underlined the key principles of this approach, which include

financial continuity, transparency, innovation, and professionalism in management principles. This aims to create a principle-centred management model that is more dynamic and responsive to the needs of modern society. Noor et al. (2018) emphasised that integrating social business is in line with *maqasid al-shariah*, in particular in the aspect of protecting wealth (*hifz al-mal*) and promoting the social well-being (*maslahah*) approach. This possible optimisation benefits waqf through more management efficiency and distribution of more benefits, all at once guarding the integrity objective of beginning waqf as an instrument of Islamic philanthropy.

The significant difference between integration models of social business and traditional management models lies in the focus on productivity assets and proactive approaches to development and investment (Yunus et al., 2010). Doherty and Kittipanya-Ngam (2021) noted that this model also applies to metric performance business to evaluate and actively engage various holders' interests, creating a more dynamic and collaborative ecosystem. Noor et al. (2018) proposed a framework encompassing conceptual identification, potency asset waqf analysis, market opportunities and social needs, development of shariah business models, and implementation of an integrated strategy's objective social and business. The framework emphasises the importance of measuring the impact of social and financial performance in a balanced way.

Although promising, the concept is not free from challenges. Hassan et al. (2018) identified several critical issues, like balancing business orientation and social goals, ensuring suitability with shariah principles, and overcoming resistance to change. Developing the right metrics to measure success also becomes a separate challenge in the implementation draft.

Along with the development of technology and the emergence of business models, concept integration in social business in Waqf keeps evolving. Abdullah (2018) noted that the development of the digital economy, impact investing, and regulation changes influence the dynamics of the application draft. Thus, integrating social business in management waqf offers an opportunity for revitalising institution waqf, creating a more significant impact and sustainability for society in the modern era.

2.7.2 The Potential of Waqf as an Instrument of Economic Empowerment

As one instrument of Islamic philanthropy rooted in the history of Muslim civilisation, Waqf has the potential to empower the economy. Mohsin et al. (2016) stated that waqf has had a role in developing socio-economic Muslim society for centuries, providing services to the public like education, health, and infrastructure. In the modern era, potential is more relevant as a solution for overcoming various economic and social challenges. Kahf (2003a) emphasised that a potency waqf is an instrument of economic empowerment because of its sustainable and flexible nature. Unlike alms, an asset waqf is maintained and developed, and temporarily, the benefits are distributed continuously. This creates a source of power for a period that can be used for various objectives, from alleviating poverty to developing micro and small businesses. (Mohsin, 2013) identified some areas where waqf can play a significant role in empowerment economics. This includes providing working capital for small businesses, developing economic infrastructure, such as markets and centres for training skills, and financing education and vocational training. Through this mechanism, waqf gives the economy direct help and constructive capacity over a long period. Sadeq (2002) explained that waqf can be a safety net and an effective social program. By providing services such as free education and health, waqf helps reduce the burden on the economy. If the public cannot allocate enough resources, it can allocate resources for productive activities. It creates a profound economic multiplier effect, encouraging inclusive growth and development.

Innovation in management waqf, like waqf cash and waqf stock, unlocks opportunities to increase the potency of economic empowerment. Çizakça (2013) argued that the waqf models may participate more in society and can raise significant funds for the empowerment of large-scale projects. However, Mohaiyadin et al. (2022) warned that professional and transparent management is necessary to maximise the potency of waqf as an instrument of empowerment economics. They emphasise the importance of adopting modern management, using technology, and collaborating with various holders of interest to increase the effectiveness and impact of the waqf. A key dimension of importance is the integration of waqf with other instruments of Islamic finance (Kahf & Mohamed, 2017), notably zakat and Sukuk. It is argued that this holistic approach has the potential to create a thriving financial ecosystem, thereby exponentially enhancing social and economic empowerment.

Waqf has the potential as an instrument of empowerment in a sustainable and inclusive economy. With innovation in management, collaboration across sectors, and support for the right policy, Waqf can become an important catalyst in creating change and positive and long-term economic growth in Muslim and even global societies. Waqf is considered one of the most suitable instruments for capital or investment in social business because of its perpetuity characteristic. Perpetuity means that waqf assets cannot be sold, transferred, or inherited. Perpetuity means assets or properties declared as waqf will remain forever (Kahf, 2003b). Perpetuity makes waqf a long-lasting charity that can maintain social business sustainability (Abdullah, 2018).

2.7.3 Social - Business Integration Models in Waqf Management

Social-business integration in Waqf management has created innovative models that maximise social impact while ensuring financial sustainability. Each model has its unique characteristics, advantages, and challenges. The selection and implementation of an appropriate model depend on the waqf institution's local context, legal framework, and specific objectives. Often, the most effective approach is to integrate and adapt various models to maximise the potential of waqf for socio-economic empowerment. The following are models of social business integration in waqf management:

- i. Productive Waqf

Mohsin et al. 2016) identified several main models that have developed in the contemporary practice of waqf management. One of the most prominent models is productive waqf, where waqf assets are managed commercially to generate income, which is then used for social purposes. A classic example of this model is the construction of commercial complexes on waqf land, which generates rental income to fund social and religious activities.

- ii. Public-Private Partnership

Another model that is becoming increasingly popular is public-private partnerships in waqf management. In this model, waqf institutions

collaborate with private business entities to develop and manage waqf assets (Raja Adnan et al., 2022).

iii. Corporate Waqf

Huda and Santoso (2020) introduced the “corporate waqf” concept in Indonesia, where a company donates some of its shares or assets for social purposes. By participating in corporate waqf, companies contribute to increasing available waqf resources and demonstrate their commitment to social responsibility.

iv. Waqf *Mutual Fund*

The "waqf mutual fund" model represents another innovative approach to integrating social impact with business. This model involves pooling waqf funds and investing them in a professionally managed portfolio. The returns generated from these investments are then directed towards supporting various social projects (Almantiqy, 2017). This structure offers the benefits of risk diversification and the potential for higher returns, all while adhering to shariah investment principles.

v. Cash Waqf- *Linked Sukuk*

The “*waqf-linked sukuk*” model, which combines Islamic financial instruments with the objectives of waqf, sukuk (sharia bonds) are issued to finance waqf projects, with investors receiving a return from the project’s income (Baiti & Syufaat, 2021). This model attracts commercial investors and mobilises funds for large-scale social projects.

vi. *Social Enterprise* Waqf

The “*waqf social enterprise*” model combines the principles of social entrepreneurship with waqf management (Kasri & Ismail, 2021). In this model, waqf assets are used to establish and run social enterprises that directly address social issues while generating income for sustainability.

vii. Cash Waqf

Mohsin (2013) highlighted the importance of the “cash waqf” model in the modern context. This model allows more community involvement and flexibility in the use of funds. Cash waqf funds can be invested in various financial instruments or used to finance socio-economic development projects.

viii. *Crowdfunding* Endowments

Thaker et al. (2018) discussed the “waqf crowdfunding” model, which utilises digital platforms to collect waqf funds from the wider community. This model not only increases the accessibility of waqf but also enables transparency and direct involvement of donors in waqf projects.

2.7.4 Implementation of Social-Business in Waqf Management

The implementation of social business in management waqf also brings a series of complex challenges and opportunities. One of the main challenges, as identified by Yunus (2010), is guarding the balance between mission social endowments and operational business needs. There is a possible risk of commercialising obscure essence waqf as an instrument of Islamic philanthropy. Simultaneously, Noor et al. (2018) emphasised the importance of ensuring **shariah compliance** in all business activities, remembering that different interpretations of Islamic law exist among scholars and schools of thought. Mohsin et al. (2016) stated that **capacity management** also becomes a significant challenge. Lack of source Power: People who have skilled businesses at the same time and understand waqf deeply often hinder the implementation of an effective social model business in waqf. This matter is compounded by limitations or obscure regulations related to integrating businesses into the Waqf, as Sadeq (2002) noted, which can vary between countries and jurisdictions.

Kahf (2003) added another dimension of the challenge, **resistance to change**. Traditional rejection of innovation in management waqf is still strong in some

communities, creating obstacles to adopting a social business approach. (Groot, 2018) also highlighted the importance of guarding transparency and accountability in operational and financial waqf to maintain public trust. Although it faces various challenges, implementing social business in Waqf offers promising opportunities. Çizakça (2014) pointed out **potential innovations in financial**, like development instrument finance, new-based waqf and integration with fintech, that can increase efficiency and reach waqf. Ibrahim et al. (2019) emphasised the opportunity for collaboration across sectors, including partnerships with the private sector, government, and non-profit organisations, which can open-source power and new expertise.

Mohsin et al. (2016) underlined the potency of a development asset waqf that is not productive to become a sustainable source of income. Temporarily, Mohaiyadin et al. (2022) highlighted opportunities technology offers, such as using blockchain to increase transparency and efficiency and implementing AI and big data in making investment decisions. Thaker et al. (2018) stated that crowdfunding and digital platforms can expand the waqif base, opening opportunities to reach new audiences and improving public participation. Abdullah (2018) continued to identify opportunities to align the waqf program with the Sustainable Development Goals (SDGs), increasing the role of waqf in overcoming global issues such as climate change.

Finally, Afifi (2024b) emphasised the opportunity to develop an innovative social business model, combining social impact with continuous financial returns in the context of waqf. This approach can open the road for adapting the social enterprise concept in management waqf, creating a new paradigm in Islamic philanthropy. In conclusion, though implementing social business in management waqf faces a significant challenge, the opportunities it offers are auspicious. Success in implementing social business will depend on the ability of the managers' waqf to overcome challenges while utilising the opportunities that exist in a practical, open road for revitalisation and optimising the potency of the waqf in the modern era.

2.8 COMPARATIVE STUDY

Comparative analysis is important in understanding the position and uniqueness of Muhammadiyah Waqf's management in a broader context. By comparing Muhammadiyah's practices with those of other waqf organisations at the national and international levels, we can identify strengths, weaknesses, and potential areas for further development. This comparison provides a perspective on where Muhammadiyah stands regarding technological legitimacy and social-business integration and highlights best practices that can be adopted or adapted. Through this analysis, we can uncover the innovations that Muhammadiyah has implemented and identify opportunities to increase the effectiveness and impact of its waqf management. Additionally, this comparison helps us understand how different approaches can influence public trust and the legitimacy of waqf organisations.

2.8.1 Waqf Practices in Indonesia

Waqf is an important instrument in Islamic economics with great potential to improve people's welfare. In Indonesia, many institutions manage waqf well and professionally. These institutions have various innovative waqf programs and provide tangible benefits to the community, ranging from building mosques and schools to empowering the community's economy through productive waqf.

i. Indonesian Waqf Board (BWI)

BWI's position is unique in Indonesia because its role doubles as regulator and manager of waqf. As a regulator, BWI is responsible for compiling policies and regulations related to waqf at the national level. This includes setting standard management, supervising the performance of the nazir (manager of waqf), and ensuring obedience to shariah law. As management, BWI is also involved directly in managing the asset waqf, especially for projects that scale nationally or have a strategic mark.

ii. Sultan Agung Waqf Foundation (YBWSA)

YBWSA has successfully implemented the management model and integrated the waqf aspect of business with a social mission. Their primary focus is on education and health. For example, they could manage a hospital (Yulianingtyas et al., 2016) or a university (Gustina & Ihsan, 2018) built upon land waqf. Operating business income is used to support social programs, such as scholarships or service-free healthcare for the public, which is not enough.

iii. Pondok Modern Darussalam Gontor

Gontor is known for excellent waqf management, especially regarding land and buildings. They have a long history and strong tradition of managing waqf to benefit education and develop Islamic boarding schools. Their waqf management model has even become a reference for many other Islamic educational institutions in Indonesia. Gontor is also transparent and accountable for managing waqf funds and provides tangible benefits to thousands of students and the surrounding community (Rofiqo et al., 2021).

iv. Yayasan Dompot Dhuafa Republika

Dompot Dhuafa takes a holistic approach to the management of waqf (Abdullah, 2012). They not only manage asset waqf but also integrate it with empowerment programs. This can include training programs and skills, providing business capital, or developing an infrastructure community. The community will feel this approach's possible impact more directly and encourage independence for an extended period.

v. Yayasan Daarut Tauhiid

This foundation, founded by KH Abdullah Gymnastiar, focuses on developing waqf in education and community economic empowerment (Munawar & Mufraini, 2021). It has various waqf programs that have provided tangible benefits to the community, such as the construction of

Islamic boarding schools and skills training. Daarut Tauhiid also has a professional and transparent waqf management system (Ihsan et al., 2016).

vi. Global Wakaf Foundation

Global Wakaf has a vast network and focuses on developing waqf in various fields, such as education, health, economy, and infrastructure. They have innovative and sustainable waqf programs, such as the construction of hospitals, schools, and mosques in various regions of Indonesia. Global Wakaf also has a team of experts competent in managing waqf professionally.

Every institution has its unique approach to management of waqf, which can become a valuable lesson for Muhammadiyah organisations developing management strategies for the waqf alone.

2.8.2 Best Practice Waqf from Some Muslim Countries

Some Muslim countries have shown significant innovation and progress in development management in contemporary times. The best practices that emerge from these countries offer an outlook on how the institution of waqf can revitalise and optimise to fulfil the needs of modern society while still guarding the essence and values of sharia. From Malaysia with innovative waqf corporate and its waqf sukuk, Kuwait with professional management, Saudi Arabia with a revitalisation program for asset waqf, Turkey with digitalisation system management, to Indonesia with development of waqf productivity, every country has developed a unique approach that reflects the context of social, economic, and cultural aspects. Learn and adapt to practice best. This can inspire and guide institutions worldwide to increase effectiveness and impact socioeconomics through management.

i. Malaysia

Malaysia has become the pioneer in innovation waqf, primarily through:

a. Corporate Waqf:

Johor Corporation has developed a waqf corporation model in which the company endows shares for social objectives (Mohd Ali, 2011). This is a possible utilisation of corporate management skills in management waqf.

b. Waqf Sukuk:

Johor state launched a waqf sukuk worth RM1 billion to finance the development of land waqf, which shows how modern finance can be used to develop asset waqf (Kachkar & Alfares, 2022).

ii. Kuwait

Kuwait Awqaf Public Foundation (KAPF) exemplify best practices in :

a. Management Professional:

KAPF implements a structure like the company's management, with a department specialising in investment, development projects, and audits (Khalil et al., 2014)

b. Diversification Investment:

KAPF invests in various sectors, including real estate, sharia capital markets, and small business intermediation, to maximise returns from asset waqf (Hassan et al., 2022).

iii. Saudi Arabia

Saudi Arabia's 'Waqf Development' program focuses on:

a. Revitalisation of Waqf Assets:

The Saudi Arabian government has identified and revitalised thousands of nonproductive assets, turning them into commercial property or public facilities (Saad et al., 2016).

b. Integration with National Vision:

Waqf is integrated into Saudi Arabia's Vision 2030, which aims to increase the contribution to the non-profit sector, including waqf, by up to 5% of GDP (Vision 2030 Kingdom of Saudi Arabia, 2016).

iv. Türkiye

The Directorate Turkey Foundation General leads in:

a. Digitalisation Waqf Management:

Turkey has developed a system management digital waqf, which includes inventory assets, reporting finance, and monitoring projects (Kasdi et al., 2022).

b. Restoration and Utilisation of Historical Assets:

Many buildings in Turkey's waqf history have been restored and utilised for social and economic objectives, combining preservation and inheritance with modern functions (Çizakça, 2018).

v. Indonesia

The Indonesian Waqf Board (BWI) has developed innovative initiatives such as:

a. Productive Waqf:

BWI encourages productive development above land waqf, like the development of hospitals and universities, which produces income for objective social purposes (Ascarya et al., 2022).

b. Cash Waqf:

Indonesia has developed regulations and infrastructure for cash waqf, which may allow broader public participation (Almantiqy, 2017).

vi. Qatar

Qatar has demonstrated innovation in waqf management, primarily through the Qatar Foundation, which has developed an innovative educational waqf model (Elkady, 2024). World-leading universities were established in Qatar using waqf funds.

vii. United Arab Emirates (UAE)

UAE, Dubai has launched the ‘Global Vision for Awqaf and Endowments’ initiative, which aims to make Dubai a global centre for waqfs and endowments (Awqaf and Minors Affairs Foundation, 2018).”

Best practices show how modern Muslim countries adapt the traditional waqf to contemporary economic and social contexts. They combine shariah principles with modern management, technology, and innovative finance to maximise the impact of waqf on society and the economy.

In the context of global endowment management, not only countries with the most Muslims show practice best, but also countries with minority Muslim populations have succeeded in developing a management model of an innovative and efficient waqf. Singapore, though its relatively Muslim population is small, has appeared as an example of a brilliant matter of this. These city-states have succeeded in developing a system management professional, transparent, and results-oriented waqf, which has become a reference for many other countries. Institutions such as the Singapore Islamic Religious Council (MUIS) and its subsidiary, Warees Investments, Singapore, have demonstrated how asset waqf can be optimised through innovative commercialisation, innovative finance, and integration with urban development strategies while maintaining shariah principles (Kasri et al., 2023). Singapore’s success in transforming asset waqf into a source of very productive and helpful power for the public has riveted global attention (Ismail et al., 2023). It has become a model studied by many other Muslim and non-Muslim countries.

2.9 THEORETICAL AND CONCEPTUAL FRAMEWORK

The management of waqf in the digital era requires an approach that is not only oriented toward managerial efficiency but also toward social legitimacy, sharia governance, and socio-economic sustainability. Muhammadiyah, as one of the largest Islamic organisations in the world with a wide network and strong social base, faces significant challenges in transforming traditional waqf management into a digital waqf model integrated with social-business practices.

The study required a solid conceptual and theoretical framework to understand this complex phenomenon. This framework is the foundation for explaining how technological legitimacy can be established, how social-business integration can be realised, and how sharia governance can be maintained within the Muhammadiyah context. Thus, the framework is not merely descriptive but also analytical, capable of linking relevant theories to the research problem and the identified research gap.

2.9.1 Theoretical Foundation

The present study employed multiple theoretical foundations to analyse the dynamics of digital waqf adoption and the integration of social-business practices in Muhammadiyah's waqf management. This multi-theoretical approach is critical because the phenomenon under investigation, the digital socio-business waqf, is inherently interdisciplinary, combining aspects of management, information systems, Islamic economics, and sociology. By engaging with different but complementary theoretical lenses, this study can provide a more nuanced and holistic explanation of how Muhammadiyah navigates technological, organisational, and socio-religious challenges in waqf development.

1. Legitimacy Theory (Suchman, 1995)

Legitimacy theory provides a lens for understanding how organisations obtain and maintain societal approval, essential for sustaining long-term institutional credibility. Suchman (1995) identifies three dimensions of

legitimacy—pragmatic, moral, and cognitive—that are particularly relevant to waqf institutions.

- i. Pragmatic legitimacy relates to the delivery of tangible community benefits. For Muhammadiyah, this involves demonstrating that waqf programs—such as hospitals, schools, or microfinance initiatives—fulfil society's immediate needs.
- ii. Moral legitimacy emphasises the ethical and normative alignment of waqf practices with Islamic values, including principles of fairness, justice, and compliance with *maqasid al-sharia*. Muhammadiyah's commitment to ensuring that digital waqf platforms (SIMAM, WaqfMu, blockchain-based waqf) remain shariah-compliant is a critical factor in maintaining this dimension.
- iii. Cognitive legitimacy develops when digital waqf practices become normalised and are perceived by the Muslim community as a natural extension of Islamic philanthropy in the digital age.

From this perspective, legitimacy theory is indispensable for explaining both the opportunities and challenges of Muhammadiyah's digital waqf. While technology can strengthen legitimacy through transparency and efficiency, it may also pose risks if perceived as incompatible with religious tradition. This theoretical lens, therefore, directly supports RO 2 and RO 3, which examine how digital transformation can enhance or threaten Muhammadiyah's waqf legitimacy.

2. Stakeholder Theory (Freeman, 1984; Mitchell et al., 1997)

Stakeholder theory asserts that organisational effectiveness depends on the ability to identify, prioritise, and balance the interests of multiple stakeholders. Muhammadiyah's waqf ecosystem involves a complex network of actors with differing levels of power, legitimacy, and urgency (Mitchell et al., 1997):

- i. Internal stakeholders: *nazir* (trustees), the Muhammadiyah Waqf Council, and the administrators of Muhammadiyah-owned social enterprises (*AUM*).
- ii. External stakeholders: *waqif* (donors), beneficiaries (students, patients, communities), regulators, government agencies, Islamic financial institutions, and the broader Muslim society.

For Muhammadiyah, success in digital waqf adoption depends not merely on technical readiness but also on the extent to which it can gain trust from *waqif*, ensure accountability to regulators, and provide reliable services to beneficiaries. This theory thus explains why technologically advanced solutions may fail without broad stakeholder buy-in. It underpins RO 1 and RO 2, which focus on governance and stakeholder dynamics in Muhammadiyah's waqf transformation.

3. Nonprofit organisations (Salamon & Anheier, 1992)

There are unique characteristics that set them apart from conventional organisations. Five characteristics of non-profit organisations have been identified: formal, private, non-profit distribution, self-regulatory, and voluntary (Salamon & Anheier, 1992). Understanding these characteristics is important for designing effective management strategies in management waqf. Challenge management in non-profit organisations, including manager waqf, includes limitations in source power, a need to maintain public legitimacy, and complexity in measuring performance (Siraj, 2012). However, non-profit organisations also have unique strengths, like intrinsic motivation for employees and volunteers and the ability to mobilise support from the public. The organisational role of non-profits in managing waqf is very significant, especially in the Indonesian context, where many asset waqf are managed by the organisation's public civil servants. An organisation such as Muhammadiyah has double roles as a *nazir* manager waqf, an institution that preaches socially, making it possible to integrate management waqf with empowerment programs more societally.

4. Technology Adoption Theories: TAM (Davis, 1989) and DOI (Rogers, 2003)

Technology adoption theories are essential for analysing the behavioural and organisational factors that shape the acceptance of digital waqf platforms.

- i. Technology Acceptance Model (TAM) (Davis, 1989) posits that two primary determinants—perceived usefulness (PU) and perceived ease of use (PEOU)—directly influence technology adoption. In Muhammadiyah’s context, digital waqf platforms such as SIMAM or WaqfMu must be perceived by *nazir* and *waqif* as useful (e.g., improving asset management and reporting) and user-friendly (intuitive interfaces, minimal technical barriers).
- ii. Diffusion of Innovation (DOI) (Rogers, 2003) explains how innovation spreads across social systems through stages: knowledge, persuasion, decision, implementation, and confirmation. This framework is particularly relevant to Muhammadiyah’s decentralised structure, where innovation adoption must occur across thousands of branches, institutions, and local communities.

TAM and DOI together provide a dynamic understanding of the adoption process, capturing both individual perceptions and organisational diffusion patterns. These theories support RO 2 and RO 3, which assess the technological and organisational determinants of digital waqf integration.

5. Social Business Theory (Yunus & Weber, 2010; Porter & Kramer, 2006)

Social business theory highlights the integration of social and economic objectives in a sustainable framework. Unlike traditional philanthropy, which depends heavily on donations, social business models generate self-sustaining revenues that are reinvested to maximise social impact.

Applied to Muhammadiyah's waqf:

- i. Waqf assets can be transformed into productive ventures such as schools, hospitals, and halal business enterprises.
- ii. Profits generated are reinvested into social programs, reducing dependency on external donors and ensuring long-term sustainability.
- iii. This approach positions Muhammadiyah as a progressive Islamic organisation capable of bridging spiritual, social, and economic imperatives.

Thus, social business theory underpins RO 1, RO 2, and RO 3 by demonstrating how Muhammadiyah can strengthen its waqf legitimacy, sustain operations, and create broader social impact through integrated socio-business strategies.

6. Shariah Governance (Al-Ghazali, 1111; Kahf, 2003)

Shariah governance provides the normative framework for ensuring that waqf management aligns with Islamic ethical and legal standards. The classical principles of tauhid (divine unity), shura (consultation), hisbah (accountability), and maslahah (public interest) form the backbone of governance in Islamic institutions. For Muhammadiyah:

- i. *Tauhid* frames waqf as a sacred trust between humans and God.
- ii. *Shura* mandates participatory decision-making within waqf councils.
- iii. *Hisbah* requires strict accountability and transparency in asset management.
- iv. *Maslahah* ensures that all waqf initiatives prioritise communal welfare.

This theory anchors the entire digital transformation process within an Islamic ethical framework, safeguarding Muhammadiyah's credibility as a faith-based organisation. It directly supports RO 1, which examines governance foundations.

Synthesising these theories, the study proposes a multidimensional framework for understanding Muhammadiyah's digital waqf transformation. This framework rests on four interdependent pillars:

1. Technology Adoption (TAM & DOI): explains the behavioural, organisational, and diffusion mechanisms underlying Muhammadiyah's adoption of digital waqf platforms.
2. Legitimacy and Stakeholder Engagement (Legitimacy and Stakeholder Theory): explains how Muhammadiyah navigates diverse stakeholder demands, builds trust, and secures legitimacy in both social and religious domains.
3. Social-Business Integration (Social Enterprise Theory): provides the sustainability dimension by showing how waqf can move beyond charity toward self-sustaining socio-business ventures.
4. Normative Foundation (Shariah Governance): ensures that the digital and business strategies are firmly grounded in Islamic principles, thereby strengthening moral legitimacy and community trust.

2.9.2 Prior Empirical Studies

Previous studies on waqf and Islamic social finance have discussed various aspects, including governance, technology adoption, stakeholder engagement, and the role of waqf in supporting social and economic development. Research has shown that digital platforms can improve transparency and efficiency in waqf management, while stakeholder trust and accountability remain critical for long-term sustainability. Other

studies highlight how waqf can be integrated with social business models to generate continuous community benefits.

Table 2.2 Prior Empirical Studies

No	Author & Year	Title / Source	Focus / Theory	Key Findings
1	Jafar et al. (2025)	<i>Waqf: from classical charitable system to modern financial tool</i>	Waqf modernisation	Waqf has evolved from a purely charitable function into a financial tool for development.
2	Almomani et al. (2024)	<i>Exploring Digital Waqf Management: Opportunities and Challenges</i>	Digital waqf	Digitalisation offers efficiency and transparency but faces challenges in regulation and donor trust.
3	Arrasya & Muhtadi (2024)	<i>Waqf Literacy Strategy via Digital Media (Case Study: Indonesian Waqf Board)</i>	Waqf literacy, digital engagement	Digital literacy campaigns significantly increase community participation in waqf.
4	Dalle et al. (2024)	<i>Cultural dimensions of technology acceptance in learning environments</i>	Technology acceptance & culture	Cultural values significantly shape perceptions of and willingness to adopt technology.
5	Verhoef et al. (2021)	<i>Digital transformation: reflection & research agenda</i>	Digital transformation	Digitalisation is a strategic enabler of organisational change and long-term competitiveness.
6	Čater et al. (2021)	<i>Industry 4.0 Technologies Usage: motives and enablers</i>	Industry 4.0 adoption	Efficiency and innovation drive adoption, with organisational support as a critical enabler.
7	Al-Saedi et al. (2020)	<i>Developing a general extended UTAUT model for M-payment adoption</i>	UTAUT, mobile payment	Social influence and trust are strong determinants of mobile payment adoption.
8	Scherer et al. (2019)	<i>The TAM: Meta-analytic SEM on teachers' adoption of digital technology</i>	TAM	Provides strong empirical validation of TAM, showing usefulness and ease of use as core drivers.
9	Daud (2019)	<i>The role of Islamic governance in the reinforcement of waqf reporting: SIRC Malaysia case</i>	Islamic governance, waqf accountability	Strong Islamic governance enhances transparency and trust in waqf reporting.
10	Teo et al. (2018)	<i>Intention to use technology among English teachers in China</i>	TAM + intention	Trust, attitudes, and social norms significantly shape technology adoption.

No	Author & Year	Title / Source	Focus / Theory	Key Findings
11	Alalwan et al. (2017)	<i>Factors influencing the adoption of mobile banking by Jordanian bank customers</i>	UTAUT2 + Trust	Trust and performance expectancy are key drivers of adoption.
12	Al-Sharafi et al. (2017)	<i>Ease of Use & Usefulness of Online Banking Services</i>	TAM + Trust	Trust mediates the relationship between usefulness/ease of use and adoption intention.
13	Vannoy & Palvia (2010)	<i>The social influence model of technology adoption</i>	Social influence model	Social support strongly predicts adoption of new technologies.
14	Talukder & Quazi (2011)	<i>Social Influence on Individuals' Adoption of Innovation</i>	Social influence model	Social influence is a critical factor in shaping innovation adoption.
15	Shih & Huang (2009)	<i>Actual usage of ERP systems: extended TAM perspective</i>	Extended TAM	External factors, such as organisational support, strongly influence ERP system usage.
16	Morris et al. (2005)	<i>Gender and age differences in employee decisions about new technology</i>	TPB + demographics	Gender and age moderate attitudes and decisions on technology adoption.
17	Gefen & Straub (2000)	<i>The Relative Importance of Perceived Ease of Use in E-commerce Adoption</i>	TAM	Both ease of use and trust are critical in shaping e-commerce adoption behaviour.
18	Siraj (2012)	<i>An Empirical Investigation Into The Accounting, Accountability And Effectiveness Of Waqf Management in SIRCs Malaysia</i>	Waqf governance & effectiveness	Identified gaps in accountability and effectiveness in SIRC waqf management, highlighting the need for stronger governance.

Although these studies provide valuable insights, most examine each theme separately: governance, technology, or social business. There is still limited empirical research that combines these perspectives within one comprehensive framework, particularly in the context of Muhammadiyah as a prominent Islamic organisation. This research seeks to address that gap by integrating technology adoption, stakeholder legitimacy, social-business practices, and Shariah Governance into a unified model of digital waqf management.

2.9.3 Conceptual Framework

The conceptual framework of this study, entitled “Legitimacy Technology Waqf Management and Social–Business Integration in Muhammadiyah Organisation”, is constructed upon the interplay between *management theories*, *technology adoption*

frameworks, social business perspectives, and Islamic governance principles. This framework seeks to explain how legitimacy in digital waqf management emerges through integrating technology, socio-business models, and organisational management within Muhammadiyah, as one of the largest Islamic organisations in Indonesia.

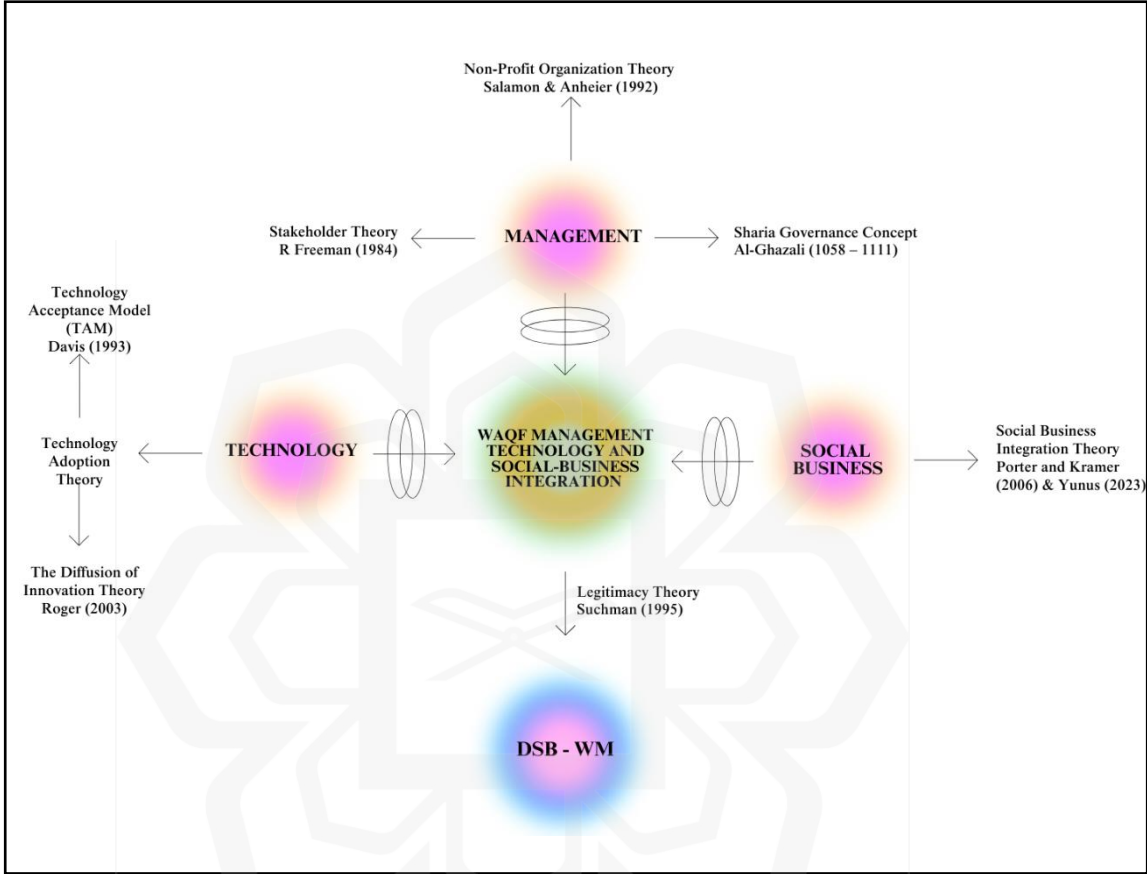


Figure 2.7 Conceptual Framework

At the centre of the model lies Waqf Management, Technology, and Social–Business Integration, which acts as the nexus for theoretical and practical considerations. The framework highlights three main domains—management, technology, and social business—each of which is grounded in established theoretical perspectives, and all converge towards the development of the Digital Socio-Business Waqf Model (DSB-WM).

1. Management Dimension

This dimension is supported by *Non-Profit Organisation Theory* (Salamon & Anheier, 1992), *Stakeholder Theory* (Freeman, 1984), and the *Shariah Governance Concept* (Al-Ghazali, 1058–1111). These theoretical foundations explain the organisational structure, accountability mechanisms, and ethical framework guiding Muhammadiyah as a non-profit waqf manager. In particular, Shariah Governance principles—such as tauhid, shura, and hisbah—provide legitimacy and trust in waqf practices while ensuring compliance with Islamic norms.

2. Technology Dimension

The acceptance and application of technology in waqf management are explained through the *Technology Acceptance Model (TAM)* (Davis, 1993), *Technology Adoption Theory*, and the *Diffusion of Innovation Theory* (Rogers, 2003). These theories clarify how technological tools—such as fintech applications, blockchain systems, and digital waqf platforms—are adopted by stakeholders. Technology integration enhances transparency, accountability, and efficiency in managing waqf assets, reinforcing legitimacy.

3. Social Business Dimension

The socio-business perspective is anchored in the *Social Business Integration Theory* (Porter & Kramer, 2006; Yunus, 2010; Yunus, 2023), which emphasises aligning social impact with sustainable business practices. In the Muhammadiyah context, waqf is managed as a religious obligation and optimised for social welfare, education, and healthcare. This dimension illustrates how waqf assets can generate shared value by balancing financial sustainability with long-term social development.

4. Legitimacy as a Core Outcome

Drawing on *Legitimacy Theory* (Suchman, 1995), the framework positions legitimacy as a mediating outcome of the interaction between management, technology, and social business. Legitimacy is achieved when Muhammadiyah's waqf management practices are perceived as desirable, appropriate, and aligned with social norms, values, and expectations. The public's trust, shaped by accountability, ethical governance, and technological transparency, becomes a critical factor in sustaining the organisation's role as a waqf manager.

5. External Influences

The framework also acknowledges the role of external forces such as government regulations (e.g., Law No. 41/2004 on Waqf), technological advancements in fintech and blockchain, and evolving public expectations of social impact and accountability. These elements provide both opportunities and constraints for Muhammadiyah in developing a legitimate and sustainable digital socio-business waqf model.

The conceptual model is dynamic and capable of adaptation and development. "Building a conceptual framework is a continuous process, which requires constant evaluation and modification" (Jabareen, 2009). Thus, the conceptual framework presented above is the foundation for structuring the research phases in examining Muhammadiyah's waqf management within a socio-business and technology integration model. By synthesising management theories, technology adoption frameworks, and social business perspectives, the model illustrates how waqf governance can evolve to meet contemporary challenges. The framework is directly aligned with the theoretical underpinnings drawn from Stakeholder Theory (Freeman & Phillips, 2005), Non-Profit and Third Sector Theory (Salamon & Anheier, 1992), Social Business Theory (Yunus, 2023), Technology Acceptance Model/TAM (Davis, 1989), Theory of Reasoned Action/TRA (Fishbein & Ajzen, 1975), Theory of Planned Behaviour/TPB (Ajzen, 1991), Legitimacy Theory (Suchman, 1995), Human Capital Theory (Becker, 1964), Diffusion of Innovation Theory (Rogers, 2003). These theories

collectively guide the inquiry across qualitative and quantitative dimensions. Accordingly, the research is designed in three sequential phases:

- i. Phase I: Qualitative - To assess the existing Muhammadiyah waqf framework, policies, and operations and evaluate the adequacy and sufficiency of its features as requirements and criteria for a technology management system within the socio-business integrated system by theory from prior literature (Freeman & Phillips, 2005; Salamon & Anheier, 1992; Yunus, 2023).
 - Management technology involves collecting, processing, storing, retrieving, and communicating relevant information for efficient management operations and business planning. There are five attributes for creating an integrated waqf model (Mohsin & Muneeza, 2020). First, the *waqif* is the waqf founder; second, the waqf property (*al-mawquf*); third, the *mutawalli* is the waqf's trustee or manager; fourth, the beneficiary of the waqf (*al-mawquf alihim*); and lastly, the *nazir* is the supervisor of the waqf. In the Muhammadiyah waqf management, the process is administratively managed by *Majelis Pendayagunaan Wakaf*. In contrast, the technical management is entirely delegated to the managers of the Muhammadiyah *Social Enterprise* (AUM) under *the other councils* at every level of the organisational structure, starting from the sub-branch, branch, and region level (Medias & Pratiwi, 2019a).
- ii. Phase II: Qualitative - To determine the significant factors influencing the construction of Muhammadiyah's socio-business technology waqf model in the digital asset era, focusing on the role of technological legitimacy and how it aligns with shariah and stakeholder expectations (online focus group/interview) with the theory (Davis, 1993a; Freeman & Phillips, 2005; Becker (1964); Rogers et al., 2019; Yunus et al., 2010).
 - Muhammadiyah managed waqf under the vision of "*Implementing the duties of the organisation Amar ma'ruf nahi Munkar, which is*

authoritative with sufficient facilities and infrastructure, independent in the Muhammadiyah organisation” (Kehartabendaan, n.d.). In the current era, technology is an essential part of organisational management. Technology comprises the infrastructure required to help processes effectively and efficiently utilise an organisation (James, 2017a). The approach used to adopt a digital technology management model is TAM, closely related to Muhammadiyah’s vision. TAM is an information systems theory that explains how users understand and apply information technology, constructed based on the perceived usefulness and ease of use (Davis, 1993). The facilities and infrastructure in the Muhammadiyah waqf management are adequate and independent.

- iii. Phase III: Quantitative – To determine the significant factors affecting adoption (Survey Questionnaire) with the theory (Davis, 1993a; Suchman, 1995)
 - TAM adopted TRA from Fishbein and Ajzen (Fishbein, 1976), which is used to see respondents’ use of receiving information technology. Davis (1989) formulated the original TAM construction by considering the various factors that affect it, namely the theory of planned behaviour (TPB): perceived usefulness, perceived ease of use, attitude, behavioural intention, actual use, and external perspective (experience and complexity).

2.10 SUMMARY

This study provided an in-depth review of the development of waqf management as an Islamic philanthropic institution that has played an important role in Muslim society for centuries. Waqf, which includes movable and immovable property, has traditionally been used for the benefit of the public or family. However, in the modern era, waqf management faces new challenges, which demand integrating technology, innovative

business models, and professional management practices to improve efficiency and impact.

Technologies, such as fintech platforms, blockchain, and crowdfunding, are now being adopted by waqf institutions to improve transparency, inclusivity, and management efficiency while remaining based on the principles of maqasid al-shariah. In addition, waqf performance is also measured through various financial and non-financial indicators to assess its impact on society. However, traditional waqf management still faces various challenges, such as a lack of professionalism, limited asset development, and legal rigidity, which hinder the optimisation of waqf as an instrument of socio-economic development.

Integrating social business models into waqf management is proposed as a new, dynamic, and sustainable approach to overcome these challenges. This approach combines philanthropic goals with modern business principles to create a productive model and support the sustainability of waqf assets, thereby providing broader social benefits. Ultimately, the conceptual framework designed in this chapter emphasises the importance of technological innovation and social business integration in waqf management to maximise the potential of waqf as an instrument of sustainable economic empowerment under Islamic principles.

CHAPTER THREE

THE MUHAMMADIYAH AS A WAQF ORGANISATION

3.1 INTRODUCTION

This chapter introduces Muhammadiyah as a case study of a national waqf institution that can be compared or contrasted with waqf institutions in other jurisdictions. As one of Indonesia's most prominent Islamic organisations, Muhammadiyah has a significant role in managing waqf assets broadly for social and economic interests, including education, health, and community empowerment. An archival case study approach was used to select and validate important documents such as Muhammadiyah historical archives, waqf management reports, Councils for Waqf Utilisation's policies, and related legal decisions from the government. This approach highlights Muhammadiyah's strategic role as a national waqf institution that has successfully managed waqf assets nationally and contributes to improving social welfare. Analysis of these documents also helps explain how waqf management in Muhammadiyah has evolved in facing the challenges of the times and society's needs. Lastly, the chapter discusses the methodological approach to assessing the technological transformation in Muhammadiyah's waqf management.

3.2 HISTORY AND EVOLUTION OF MUHAMMADIYAH WAQF

Muhammadiyah is a socio-religious organisation and movement contextualised to Java and Indonesian society's social and cultural conditions in general (Mu'thi et al., 2015). Kyai Haji Ahmad Dahlan, born Muhammad Darwisy, is a founder of the Muhammadiyah organisation who was inspired, motivated, and encouraged by Surah *Al Maun* in the Qur'an (Elhady, 2017; Yusuf & Abbas, 1985) to help those who are weak, including the orphans and needy (Mu'thi et al., 2015). *Al-Maun* focuses on the three main ministries of assistance. First, there are people with low incomes to fulfil their lives (*Al-Maun*), i.e., education (provide schools and universities), health (provide hospitals and health clinics), and dignify the orphans (provide orphanages and boarding

schools) (Utami et al., 2017). Muhammadiyah was established in Kauman, Yogyakarta, on November 18, 1912, and declared in a public meeting on December 20, 1912, in Gedoeng Lodge Gebauw Malioboro. Unfortunately, it did not automatically obtain legal recognition from the Dutch East Indies government after a long process. Finally, it was approved as a legal entity on August 22, 1914, recorded on Besluit Number 81 (Nashir, 2015b).

3.2.1 Founding Principles and Historical Development

Kyai Haji Ahmad Dahlan preached verbally and practised preaching in life according to the Sunnah of Prophet Muhammad PBUH. An important factor influencing the group following him became the match between Kyai Haji Ahmad Dahlan's words and actions (Nashir, 2015). Islam emphasises two basic forms of human relationships, namely the relationship with Allah as the Creator (*ḥabl min Allāh*) and the relationship with fellow human beings (*ḥabl min al-nās*). The verse of Al-Furqan emphasises that four main characteristics reflect a person's relationship with Allah (*ḥabl min Allāh*) (Akhyar & Wilaela, 2018). These characteristics include performing night prayers, fearing Allah SWT's punishment, always prioritising Allah SWT, and understanding the Qur'an verses. On the other hand, the relationship with fellow human beings (*ḥabl min al-nās*) directly impacts human interaction (Wahab, 2014). The Prophet Muhammad SAW is the best role model in Islam, who shows noble values such as *siddiq* (truthful), *amanah* (trustworthy), *fatanah* (wise), and *tabligh* (delivering the commands and prohibitions of Allah SWT). Following these values can increase self-motivation to become a better caliph (Samsudin, 2018). Therefore, besides worshipping Allah, Muslims must also pay attention to relationships with other creatures as part of worship.

Kyai Haji Ahmad Dahlan taught the importance of people living a social life manifested in mutual assistance, care of the poor and orphans, and cooperation to enhance their welfare (Mu'thi et al., 2015). Some scholars (Shaikh et al., 2017a) also emphasised that human welfare is only complete in Islamic worldviews if reached in both worlds: the world's temporal life and the eternal afterlife. The Islamic view of the world offers a broader perspective on the two world frameworks and incentives. It could

lead to greater social action readiness, positive involvement in social causes, higher charity, and more selfless behaviour in social relations and the market.

Kyai Haji Ahmad Dahlan enhanced social welfare through Waqf. Although the Muhammadiyah organisation initially focused on education, Muhammadiyah established itself as a social welfare organisation for the next generation (Mu'thi et al., 2015). Kyai Haji Ahmad Dahlan's hard work was not done to gain wealth but to lay down the fundamental roots of the Muhammadiyah movement. He sometimes endowed almost all his possessions until some clothes and kitchen utensils were left. His enthusiasm is to defend the poor and oppressed Muslims with low education.

This history occurred around the 1921s, as explained by the Chair of the LSBO Central Board of Muhammadiyah (Syukriyanto, 2018).

Kyai Haji Ahmad Dahlan faced an obstacle and invited the Kauman residents to his house one afternoon. Kauman residents came flocking, and after many people gathered, Kyai Haji Ahmad Dahlan delivered the news that the Muhammadiyah's treasury was empty, while the Muhammadiyah School's teachers had not been paid. Muhammadiyah needed at least 500 guildens to pay teachers and employees and to finance Muhammadiyah schools. To fulfil this, Kyai Haji Ahmad Dahlan intended to auction off all the items in his house, ranging from clothing, cupboards, tables, chairs, beds, wall clocks, standing clocks, lighting, and more. Kyai Haji Ahmad Dahlan planned to sell off all the things he had, and all the money from the sale would be used to finance Muhammadiyah schools, especially to pay teachers and employees. The Kauman residents were stunned after hearing Kyai Haji Ahmad Dahlan's explanation. Kyai Haji Ahmad Dahlan's students who attended the recitation of Thaharatul Qulub were touched by the spirit of sacrifice shown by Kyai Haji Ahmad Dahlan. They looked at each other, whispering. To cut a long story short, the Kauman residents, especially the Tharatul Qulub study group members, scrambled to buy Kyai Haji Ahmad Dahlan's possessions. Some bought suits, sarongs, clocks, wardrobes, tables, chairs, and so on. All of Kyai Haji Ahmad Dahlan's things were finished, auctioned, and quickly collected more than 4,000 guilders. Oddly, after completing the auction, no one brought Kyai Haji Ahmad Dahlan's belongings. Of course, Kyai Haji Ahmad Dahlan was surprised that they did not want to take the items auctioned. Kyai Haji Ahmad Dahlan exclaimed, "*Ladies and gentlemen, please take the items that you have purchased during the auction. Or will I take them to you later?*" They answered Kyai Haji Ahmad Dahlan, "*No need for it, Kiai. We will return all of these items to Kiai.*" "*Then what about the money collected?*" asked Kyai Haji Ahmad Dahlan. Said one of them, "*Yes, for Muhammadiyah. Did not the Kiai say*

Muhammadiyah needed funds to pay teachers and employees and pay for their schools? “Yes, but Muhammadiyah needs only about 500 guilders. This fund has collected more than 4000 guilders. Then how about the rest?” asked Kyai Haji Ahmad Dahlan. The man answered, “Yes, just put it in the Muhammadiyah treasury.”

The ideas that arose from thereon included building health centres, hospitals, educational institutions, orphanages, or places of worship as one solution to the socio-economic problems faced by worshipers or outside the congregation. The aforementioned “*Amal Usaha Muhammadiyah*” funds come from zakat, *infaq*, sadaqah, or endowments voluntarily provided by the public. Likewise, the professional management of *Amal Usaha Muhammadiyah* by activists or followers of this movement is done voluntarily. They do not receive a salary, but a substitute for the ability and time services represented by the AUM. Therefore, the compensation for a Muhammadiyah hospital director, School Principal, Muhammadiyah University Rector, or Principal is only a substitute for the services provided, not based on salary standards as is known in other government or private institutions. The AUM management or Muhammadiyah leadership, who oversees *Amal Usaha Muhammadiyah*, in Muhammadiyah, known as majlis or division, also the leader of this movement as a regulator, who appoints the Chancellor, Hospital, or School Principal, does not get a salary or honorarium (Mu’thi et al., 2015)

3.2.2 Establishment of Waqf Institutions

In the Dutch Colonial Era (1914), Kyai Haji Ahmad Dahlan adopted the waqf (Syukriyanto, 2018) to solve the current social issues developed to enhance social welfare during the Prophet’s time. Nevertheless, the Muhammadiyah organisation initially focused on education (Mu’thi et al., 2015). Thus, Muhammadiyah established itself in social welfare for the next generation. Ahmad Dahlan was a well-known teacher and organiser, and Muhammadiyah became Southeast Asia’s most prominent modern Islamic organisation. This section explores the history of the waqf institution and *Majelis Wakaf dan Kehartabendaan* as a management waqf in the Muhammadiyah organisation.

Muhammadiyah, as a religious organisation, obtained its status of a legal entity (*rechtspersoon*) since the Dutch colonial period (1914) and has carried out its function as a nazir. Furthermore, Law No. 41/2004 on Waqf has recognised them by allowing an Islamic organisation to be a nazir for waqf property (Kehartabendaan, n.d.-b). Several policies in recognition of Muhammadiyah as a legal entity, as well as waqf management, are:

- i. Gouvernement Besluit 22 August 1914 No. 81
- ii. Gouvernement Besluit 16 August 1920 No. 40
- iii. Gouvernemen Besluit September 2, 1921 No. 36
- iv. Description of the subject: Rechtspersoon Muhammadiyah
- v. Letter of the Directorate General of Legal Development, Ministry of Justice RI No. J.A.5/160/4
- vi. Certificate of the Minister of Social Affairs No. K / 162-IK /71/MS
- vii. Certification from the Ministry of the Republic of Indonesia
- viii. Statement from the Minister of Religion No. 1 of 1971
- ix. The Minister of Home Affairs Decree regarding the Muhammadiyah Organisation's appointment as a Legal Entity that can own land with property rights No. Sk.14/DDA/1972
- x. Extension of the Decree of the Minister of Home Affairs
- xi. Statement of the Minister of Education and Culture of the Republic of Indonesia No. 23628/MPK/74
- xii. Report of the Minister of Health No. 155/Yan.Med/Um/1998
- xiii. Letter from the Ministry of Justice and Human Rights No. C2-HT.01.03.A.165.

Furthermore, a special council was formed to manage the waqf properties, namely the *Majelis Wakaf dan Kehartabendaan*. Based on the results of the 45th Conference in Malang in 2005, the nomenclature was changed to the *Majelis Wakaf dan Zakat Infaq dan Shadaqah (ZIS)*, and then, when the 46th Muhammadiyah Conference in Yogyakarta, the terminology was changed back to the first (the *Majelis Wakaf dan Kehartabendaan*). The *Majelis Wakaf dan Kehartabendaan* was created based on Muhammadiyah guidelines (*Anggaran Dasar*), a Leadership Assistance Organisation. This Council has the main task of developing and securing endowments and assets

belonging to the *Society* and guiding the community in implementing endowments, grants, *infaq* and *sadaqah*, and other endowments. Moreover, the *Majelis Wakaf dan Kehartabendaan* has formed the Provincial, Regency / City, and Sub-District management in the organisation's ranks. They are the assistant leadership in the regions and branches and an extension of the *Majelis Wakaf dan Kehartabendaan* of the Central Board of Muhammadiyah (Kehartabendaan, n.d.-b). In the 48th *Mukhtamar Muhammadiyah 2023*, the *Majelis Wakaf dan Kehartabendaan* was changed to Council for Waqf Utilisation (*Majelis Pendayagunaan Wakaf*).

Council for Waqf Utilisation manages waqf with the vision of “*Implementing the duties of the organisation Amar ma'ruf nahi Munkar, which is authoritative with sufficient facilities and infrastructure, which is independent in the Muhammadiyah organisation.*” (Kehartabendaan, n.d.-c). To perform the objective, there are five mission statements (Kehartabendaan, n.d.-a), namely:

- i. Strengthening the organisation's performance by consolidating its management.
- ii. Registering the assets of the Organisation and arranging for maximum utilisation.
- iii. Adding, growing, developing, and securing the assets of the Organisation in the form of waqf and assets.
- iv. Increasing the belief of the people in carrying out obligatory deeds and sunnah, especially for *zakat*, *infaq*, and *sadaqah*;
- v. They increase administrative discipline and motivation to do charity in the organisation by enhancing supervision throughout the management.

3.3 STRUCTURE OF THE COUNCIL FOR WAQF UTILISATION

The Council for Waqf Utilisation is an organisational structure designed to ensure efficient and integrated Waqf management, encompassing sharia, law, administration, investment, and education. With good governance, waqf assets are expected to benefit the community and society long-term. Based on the attachment to the Decree of the

Central Board of Muhammadiyah, Number: 165/KEP/I.0/D/2023, the organisational structure of the Council for Waqf Utilisation in 2022-2027.

**MEMBER OF THE BOARD
THE COUNCIL FOR WAQF UTILISATION
THE CENTRAL BOARD OF MUHAMMADIYAH**

Board of Experts	: Prof. Dr. Raditya Sukmana, S.E., M.A. Prof. Dr. Masri Mansoer, M.Ag. Dr. Untung Cahyono, M.Hum.
Sharia Supervisory Board	: Dr. Ari Anshori, M.Ag. Zafrullah Salim, S.H., M.H. Anang Rikza Masyhadi, M.A., Ph.D.
Chairperson	: Dr. Amirsyah Tambunan
Vice Chairperson I	: Dr. Jarot Wahyudi, S.H., M.A.
Vice Chairperson II	: Dr. Husaini, S.H., M.Kn.
Vice Chairperson III	: Rizaluddin Kumiawan, S.Ag., M.Si.
Vice Chairperson IV	: Dr. Fetrimen Zubir, M.Pd.
Vice Chairperson V	: Dr. Mahli Zainuddin Tago, M.Si.
Vice Chairperson VI	: Muhammad Rofiq. S.Ag., M.E.
Vice Chairperson VII	: Mohammad Budi Pahlawan, S.H.
Secretary	: M. Mashuri Masyhuda, S.Si., M.M.
Vice Secretary I	: Mohamad Arifin Purwakananta, S.I.Kom., SFRM.
Vice Secretary II	: Ade Iva Putra, S.H.
Vice Secretary III	: Rusli Halim Fadli, S.H.
Vice Secretary IV	: Marjana Djono, M.Se.
Treasure	: Ir. Syafrol Makniur, M.Pd.I.
Vice Treasurer I	: Dr. Nur Hakim, S.H., M.H., C.L.A.
Department I Inventory and Certification of Waqf	
Head of Department	: M. Nurul lhsan, S.T., M.T.
Member	: Dr. R. Muhammad Amin Sunarhadi, S.Si., M.P. Ana Rahmawati Wibowo, S.E., M.E.
Department II Nazir Institution	
Head of Department	: Muhammad Shulthoni, Lc., M.A., M.S.I., Ph.D.
Member	: Eny M. Wijayanti, S.E., M.Si. Yudi Ahmad Faisal, S.E., CIFP., MA., Ph.D. M. Adi Rosyadi Nefra Rizki, S.Pd.I., M.Ag. Marta Satria Putra, S.H., M.H.

Department III Cooperation and Investment

Head of Department : Ahmad Zaky, M.B.A.
Member : Danang Rizki Ginanjar, S.T., MBA.
Edwin Hidayat Abdullah, S.E., MPM.
Dhorifi Zumar, S.Ag.
Dr. Asep Supyadillah, M.Ag.
Joko Intarto, S.H.

Department IV Advocacy and Disputes

Head of Department : Dr. Afdal Zikri, S.Ag., S.H., M.H.
Member : Azrai Ridha, S.H.
Joko Riyanto, M.I-I.
Dr. Yuniati Faizah, S.H., M.Si.
Fuad, S.H., M.H., M.Kn.
Faisal Riza, S.H., M.Hum.

Department V Education and Training

Head of Department : Moh. Danial Ramli, S.H.
Member : M. Sodikin, S.IP.
M. Reza Prima, M.E.
Kurnia, M.M.
Heri Sucipto

Department VI Utilisation of Rural Waqf Land

Head of Department : Muh. Irfan Nugroho, S.T.
Member : Nanang Qodir, S.T.
Dr. Rinovian Rais, M.M., M.Pd.
Art Susanto, S.E.I., M.E.

Department VII Utilisation of Urban Waqf Land

Head of Department : Hari Eko Purwanto, M.I.Kom.
Member : Subhan Wahyudi, S.M., M.M.
Sedek Rahman Balita, S.Sos.
Dede Kumiawan, S.E.

Directors/Nazhir of Cash Waqf

Dr. Ir. Agus Edi Sumanto, M.M., M.Si., ASAI., RFA. Ir.
Hari Wurianto, M.M.
Marjana, M.Sc.
Nurcahyo

The organisational structure of waqf management described above is designed to ensure professional, transparent, and shariah-compliant waqf management. Consisting of various boards, chairpersons, secretaries, treasurers, and departments with specific duties and responsibilities, this structure aims to optimise the potential of waqf assets through an integrated approach. Each element is important in supporting waqf governance, from sharia supervision and provision of technical advice to productive waqf asset management (Majelis Wakaf dan ZIS PP Muhammadiyah, 2010). Various departments, such as waqf inventory, investment cooperation, advocacy, and utilisation

of waqf land in rural and urban areas, show how comprehensive this system is in maintaining the sustainability of waqf benefits for the community.

i. The Board of Shariah Supervisory

This council is tasked with ensuring that shariah principles govern waqf management. It monitors and supervises all waqf activities under Islamic law.

ii. The Boar of Expert

This council provides technical and scientific advice to improve the effectiveness of waqf management. Experts come from different fields, such as economics, law, and management.

iii. Chairperson

The Chairperson is the main leader responsible for all strategic policies and important decisions in waqf management. The Chairperson works closely with the Vice Chairperson to coordinate the program's implementation and overall supervision.

iv. Vice Chairperson

The Vice Chairperson supports the Chairperson's duties by overseeing various strategic areas. They have specific responsibilities related to their respective areas of expertise, such as law, management, investment, and education.

v. Secretary and Vice Secretary

Responsible for the organisation's administrative affairs and documentation, ensuring internal communication runs well, and managing agendas and reports.

vi. **Treasurer and Vice Treasurer**

Managing the organisation's finances, ensuring transparent financial statements, and planning the allocation of waqf funds accountably.

vii. **Board of Directors/Nazhir of Cash Waqf:**

In charge of managing cash waqf professionally and responsibly. Nazir consists of a special management team that maximises the potential of cash waqf for various productive purposes.

viii. **Departments:**

Each department has coordinators and members who focus on specific areas such as inventory, development of nazir institutions, investment cooperation, legal advocacy, education, and the use of waqf land in villages and cities.

i. **Waqf Inventory and Certification**

This department has a crucial role in **data collection, validation, and certification of waqf assets**. The focus is to ensure that all waqf assets have a clear and well-documented legal status. This aims to avoid future disputes and increase public trust in waqf management.

ii. **Nazir Institution**

This department focuses on capacity building and the institution of nazir (waqf managers). A professional and competent nazir is crucial to ensuring the optimal use of waqf assets under shariah goals.

iii. **Cooperation and Investment**

This department is tasked with carrying out strategic cooperation and investment to develop and maximise the value of the benefits of waqf

assets. The focus is to ensure that waqf assets are productive and bring sustainable results.

iv. Advocacy and Disputes

This department handles waqf's legal, advocacy, and dispute resolution aspects. Waqf often faces legal problems, so an effective settlement mechanism is needed.

v. Education and Training

This department is responsible for education, training, and improving waqf literacy in the community. Education aims to increase understanding of waqf and encourage active community participation.

vi. Utilisation of Rural Waqf Land

This department focuses on using waqf land in villages for productive activities that support economic empowerment and the welfare of rural communities.

vii. Utilisation of Urban Waqf Land

This department is tasked with ensuring the use of waqf land in urban areas to support productive activities such as the construction of public facilities, property, or economic activities.

3.4 WAQF ASSET MANAGEMENT IN MUHAMMADIYAH

Asset management in Muhammadiyah includes the land, buildings, goods, and vehicles owned by organisations in various regions of Indonesia. Muhammadiyah, one of Indonesia's largest Islamic organisations, has significant assets spread throughout the country. Table 2.1 below displays the data on assets managed by The Province Branch of Muhammadiyah (PWM) throughout Indonesia, including the number of land, buildings, goods, and vehicles sourced from the SIMAM web. The data covers 34 Muhammadiyah regions with a total land area of more than 213 million square meters

and building assets, goods, and vehicles that support organisational activities in various fields, including education, health, and social services. These assets reflect Muhammadiyah's commitment to utilising waqf and grants to benefit the broader community through facilities across various regions.

Table 3.1 Muhammadiyah Aset Management

Name	Land		Buildings	Goods	Vehicles
	Total Unit	m ²			
<u>PWM Aceh</u>	130	50.753.604,42	38	0	0
<u>PWM Bali</u>	47	27.921,00	16	350	6
<u>PWM Bangka Belitung</u>	82	479.482,00	89	3.975	0
<u>PWM Banten</u>	150	419.766,25	29	2.878	16
<u>PWM Bengkulu</u>	116	2.337.653,47	89	305	6
<u>PWM DIY</u>	4.679	2.574.849,59	3.229	502.432	392
<u>PWM DKI Jakarta</u>	135	185.344,60	92	11.542	9
<u>PWM Gorontalo</u>	130	463.506,11	41	63	2
<u>PWM Jambi</u>	22	260.822,00	18	2.038	5
<u>PWM West Java</u>	690	859.069,90	278	5.820	22
<u>PWM Central Java</u>	11.485	8.498.659,42	5.366	668.793	853
<u>PWM East Java</u>	2.718	13.485.642,40	947	57.228	123
<u>PWM West Kalimantan</u>	125	950.846,96	68	6.806	15
<u>PWM South Kalimantan</u>	524	2.330.558,15	292	16.798	82
<u>PWM Central Kalimantan</u>	205	2.228.561,62	276	19.535	50
<u>PWM East Kalimantan</u>	332	1.908.398,35	242	27.686	40
<u>PWM North Kalimantan</u>	21	59.907,00	25	6.263	4
<u>PWM Riau Islands</u>	16	46.959,00	20	4.605	5
<u>PWM Lampung</u>	941	110.353.853,61	292	61.640	66
<u>PWM Maluku</u>	25	295.753,00	69	1.535	3
<u>PWM North Maluku</u>	3	57.777,00	3	12	0
<u>PWM West Nusa Tenggara</u>	19	81.545,00	28	15.514	34
<u>PWM East Nusa Tenggara</u>	26	88.916,00	0	0	0
<u>PWM Papua</u>	36	165.572,00	13	0	0
<u>PWM West Papua</u>	99	622.357,00	51	2.946	3
<u>PWM Riau</u>	100	675.378,14	77	16.408	16
<u>PWM West Sulawesi</u>	98	196.383,00	0	0	0
<u>PWM South Sulawesi</u>	603	3.114.033,59	410	57.718	72
<u>PWM Central Sulawesi</u>	107	517.800,69	164	9.019	12
<u>PWM Southeast Sulawesi</u>	77	1.941.775,50	57	2.375	8
<u>PWM North Sulawesi</u>	49	1.972.281,00	43	0	0
<u>PWM West Sumatra</u>	803	2.802.850,32	176	11.006	12
<u>PWM South Sumatra</u>	237	2.466.767,16	201	14.247	14
<u>PWM North Sumatra</u>	170	275.295,51	104	13.469	5
Total (34)	25.000	213.499.890,76	12.843	1.543.006	1.875

Muhammadiyah manages various assets, including land, buildings, and other financial assets used for social and educational purposes. These waqf assets are spread across various regions in Indonesia and are generally used to build public facilities such as mosques, hospitals, schools, and universities. In addition to physical assets, Muhammadiyah has also begun to manage money waqf in a more flexible way that can be invested to generate sustainable profits.

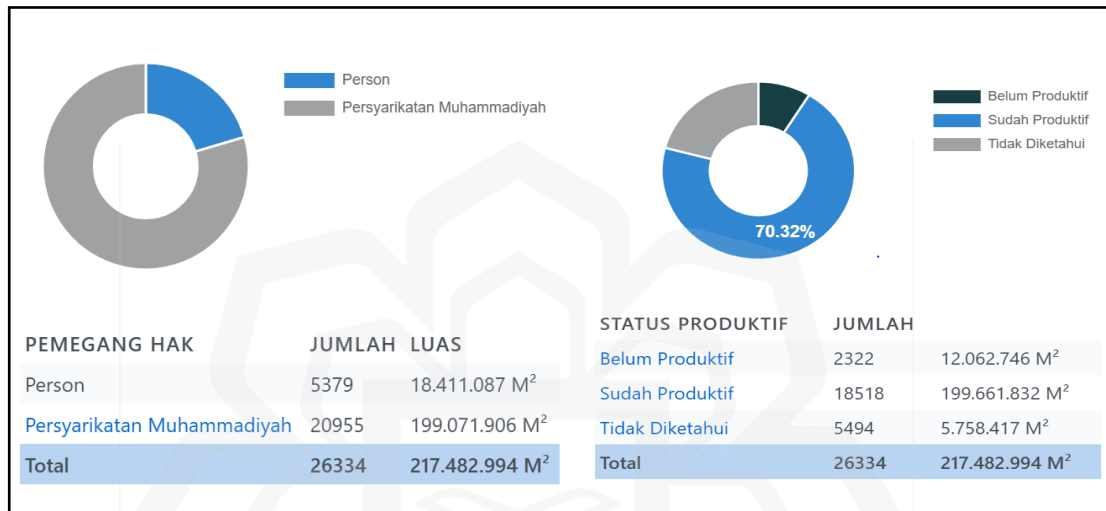


Figure 3.1 Muhammadiyah Waqf Land

There are 26,334 total units of land. Of these, 20,955 units, or about two-thirds (2/3), are held by the waqf, with an area of about 199,071,906 square meters. The rest of the land, as many as 5,379 units, with an area of about 18,411,087 square meters, is owned by individuals. This shows that most of the land managed by Muhammadiyah comes from the waqf, while the other is obtained through grants or purchases. Based on productive status, most of the land (70.32%) is already productive, with 18,518 units covering an area of 199,661,832 square meters. Unproductive land amounted to 2,322 units, covering an area of 12,062,746 square meters. In addition, there are 5,494 units of land covering an area of 5,758,417 square meters whose productive status is unknown. This data shows that Muhammadiyah has succeeded in utilising most of the waqf land or grants it has for productive purposes. At the same time, much of the land has not been utilised optimally, and further strategies are needed to increase its productivity. Transparency in the management and reporting of productivity status is important to ensure the optimisation of waqf assets in the future.

Muhammadiyah's investment and waqf asset development strategy focuses on asset optimisation with the principles of prudence and sustainability. They use innovative approaches in developing assets, including cooperating with Islamic financial institutions for safe and shariah-compliant investments. The utilisation of waqf assets is focused on social programs that have a broad impact, such as health services, education, and community empowerment, so that the main goal of waqf as a sustainable charity is achieved. In terms of transparency and accountability, Muhammadiyah has a strict supervision mechanism. Financial statements related to waqf management are prepared periodically and audited by independent institutions to ensure no abuse. Muhammadiyah also ensures the disclosure of information to the public regarding waqf assets through various platforms so that the public can know the development and use of the waqf managed. This accountability is important to maintain the people's trust and increase community participation in the waqf.

3.5 SOCIAL AND ECONOMIC IMPACT OF MUHAMMADIYAH WAQF

Muhammadiyah, one of the largest Islamic organisations in Indonesia, was founded in 1912 by KH. Ahmad Dahlan in Yogyakarta. This organisation's main goal is to practice Islamic teachings based on the Qur'an and the Sunnah of the Prophet PBUH. Since its inception, Muhammadiyah has been committed to empowering the ummah through various activities in the education, health, social, and economic sectors. This empowerment effort aims to create a just, prosperous, civilised society and face global challenges in globalisation and modernity.

3.5.1 Educational Empowerment

One of the most prominent forms of Muhammadiyah empowerment is in education. Muhammadiyah has established over 5,000 schools and more than 174 universities throughout Indonesia, making it one of Southeast Asia's largest private education providers. The education from kindergarten, elementary school, high school, and university. In addition, these educational institutions focus on religious education, general science, and practical skills. This aligns with the "progressive Islam" concept

by Muhammadiyah, which emphasises the importance of integration between religious and modern science (Pimpinan Pusat Muhammadiyah, 2023). For example, Muhammadiyah Schools implement a curriculum integrating general science with religious education, emphasising character education based on Islamic values, such as honesty, discipline, and responsibility. This inclusive and holistic education model has produced many successful graduates and contributed to various social fields (Noupal, 2021).

Muhammadiyah's approach to education emphasises the integration between general science and Islamic religious values. The Muhammadiyah educational curriculum is designed to form students who are not only academically successful but also have a strong character based on Islamic values such as honesty, discipline, and responsibility (Abbas, 2021). In addition, Muhammadiyah also prioritises innovation in education through digitalisation and the application of information technology to improve the quality of learning and accessibility of education, especially during the COVID-19 pandemic, which forced many institutions to switch to online learning (Hidayat & Hudaidah, 2021; Solviana, 2020). Through education, Muhammadiyah seeks to empower the community to have the knowledge and skills necessary to face the challenges of the times.

3.5.2 Health Empowerment

In the health sector, Muhammadiyah has established many hospitals, clinics, and community health centres. This effort aims to provide affordable health services for the community and raise awareness of the importance of health and hygiene from an Islamic perspective (Rachmawati, 2019). This empowerment in the health sector also includes disease prevention programs and the promotion of healthy lifestyles. Muhammadiyah has established over 500 hospitals, clinics, and other health facilities throughout Indonesia. One example is PKU Muhammadiyah Hospital Yogyakarta, which is known as a pioneer in Islamic-based health services in Indonesia (Rachmawati, 2019). Muhammadiyah Health Services emphasises the principle of universal humanity by providing quality health services for all groups of people regardless of their socio-economic background.

Muhammadiyah is also active in public health programs such as immunisation campaigns, nutrition counselling, and reproductive health programs. During the COVID-19 pandemic, Muhammadiyah, through the Muhammadiyah COVID-19 Command Centre (MCCC), has played an active role in efforts to mitigate and handle the pandemic, including procuring vaccinations, providing health services for COVID-19 patients, and providing health counselling through various media (Ichsan, 2020).

3.5.3 Economic and Social Empowerment

In the socio-economic aspect, Muhammadiyah has developed various economic empowerment programs for the people. This includes the establishment of cooperatives, sharia microfinance institutions, and small and medium business development programs (Medias et al., 2020). The goal is to increase the community's economic independence and reduce social inequality. Muhammadiyah is also active in Islamic philanthropic activities, such as managing zakat, infaq, and alms, which help people in need and support empowerment programs (Hakim & Sarif, 2021).

The Muhammadiyah economic empowerment program aims to create an economically independent society that can adapt to the global market dynamics (Hakim, 2018). In addition, Muhammadiyah develops social programs, such as establishing orphanages, nursing homes, and social rehabilitation centres that provide services for vulnerable groups. Muhammadiyah strives to alleviate poverty and improve the community's welfare through these programs.

3.5.4 The Da'wah and Socio-Religious Empowerment

Muhammadiyah's empowerment strategy focuses not only on material aspects but also on spiritual and intellectual aspects (P. Muhammadiyah, 2023; Nashir, 2015). This organisation developed the concept of "cultural da'wah," which aims to spread Islamic values in a way that is under the local cultural context (Nurrohmah, 2017). This approach allows Muhammadiyah to empower the community while respecting Indonesia's local wisdom and cultural diversity.

Da'wah is one of the main focuses of Muhammadiyah's empowerment. Muhammadiyah views da'wah as an effort to spread Islamic teachings that are *rahmatan lil 'alamin* (mercy for all nature), which is not limited only to theological aspects but also to social transformation (Muhammad Olli et al., 2021). Muhammadiyah actively holds various da'wah activities such as recitations, lectures, religious discussions, and training of preachers or da'wah practitioners. Muhammadiyah also carries out various initiatives in social and religious affairs to overcome complex social problems, such as poverty, social disparities, and conflicts. Muhammadiyah promotes a community-based approach and advocacy that emphasises the importance of social solidarity and equality. Aisyiyah, the women's wing of Muhammadiyah, also plays an important role in women's empowerment through programs supporting education, health, and women's involvement in societal decision-making (Tohma et al., 2023).

In the face of globalisation and the Industrial Revolution 4.0, Muhammadiyah continues to adapt and develop relevant empowerment programs. These include training in digital skills, creative economic development, and strengthening media literacy among members and the public (Suyudi & Mahmudah, 2021). This effort shows Muhammadiyah's commitment to continuing to be relevant in its efforts to empower the community amid changing times.

3.6 CHALLENGES IN THE MANAGEMENT OF MUHAMMADIYAH WAQF ORGANISATION

Presently, the community's trust in the waqf in Muhammadiyah is still very high. This is reflected in the significant developments in managing the organisation's waqf assets. Based on The Report of the Central Board of Muhammadiyah 2010-2015 (Pimpinan Pusat Muhammadiyah, 2015b), which summarises a study by the Council for Economy, Business, and Tourism, 2015, Muhammadiyah managed 3,717 hectares of waqf land. This figure reflects the organisation's success in maintaining public trust and managing waqf assets effectively. Furthermore, in the 2024 National Working Meeting II, the Central Board of Muhammadiyah of the Council for Waqf Utilisation reported a significant increase, with the area of waqf land managed reaching 21,000 hectares (Majelis Pendaaygunaan Wakaf Muhammadiyah, 2023a). This increase shows sustainable

growth in the management of the Muhammadiyah waqf. It strengthens the role of this organisation in managing and developing waqf assets for the community's social, economic, and religious interests. Economic efforts are increasingly being felt by fostering MSMEs, including mini markets, developing the Baitut Tamwil Muhammadiyah network, utilising waqf land, and cooperating with companies and financial institutions at home and abroad. However, there are still forest shrubs and vacant land.

The fundamental challenge in policy formulation, articulation, and coordination is faced by centralised and decentralised Muhammadiyah management. The solidarity of Muhammadiyah is coherent across subsidies with a centralised design. Centralised bureaucracy, however, may result in bottlenecks, selective response, and lack of timeliness due to the Central Board's periodic decision and oversight. This may slow down Muhammadiyah's pace of implementation because it has much to do with the operational issues and solutions. On the other hand, the decentralisation pattern allowed the Muhammadiyah movement's flexible, timely, more inclusive and pragmatic response towards the issues and challenges. On the other hand, it may result in inconsistency between branch / regional leaders and regions where sectoral differences occur between Muhammadiyah and its charitable efforts. Therefore, more thorough research is necessary to identify centralised and decentralised systems. The Muhammadiyah should immediately ascertain which is the right one so that the problems are not more complex and generalised (Pimpinan Pusat Muhammadiyah, 2015b). An important perspective to policy choice is the distinction between strategic and operational issues and challenges that require common centralised policy guidance, as compared to versatile, robust, and flexible operational solutions. With digitisation, these categories will be elaborated on within the Muhammadiyah technology transformation framework in the next chapter.

- i. Administration

There are issues of proper certification, documentation, records, and databases. The number of Muhammadiyah 's assets and waqf land not yet secured with a certificate of endowment or title rights resulted in controversy. In 2013, the Council for Waqf Utilisation visited and accompanied 34 land waqf asset disputes in several regions. For example,

the Muhammadiyah Association territory in Aceh occupies 2.486.061m², with details as follows: waqf land 1.733.050 sq.m or 70 percent and non-waqf 753.011 sq.m. The land comprises 221 waqf fields (59,6 percent) and 150 non-waqf (40,4 percent), representing 371 fields. In other words, the waqf region runs more than twice the amount of non-waqf land owned by Society. Countries with 46 field certificates do not yet have a 302-field certificate (Asy`ari, 2017a). In the centralised and decentralised bureaucracy, the system needs a database to identify how much waqf land is under Muhammadiyah management and how much they have been utilised.

ii. Management

Several issues need to be highlighted in the Muhammadiyah waqf management. *Firstly*, Muhammadiyah waqf land, 8.64% or about 321 ha, has yet to be utilised in shrub forests and vacant land. For example, unused waqf land under the management of the Muhammadiyah Society reached 566,375 sq.m or 32.68 percent of the waqf land spread throughout Aceh (Asy`ari, 2017b). Then, it is 100 ha in Nusa Tenggara Timur, and in Nusa Tenggara Barat, it is 75 hectares (Pimpinan Pusat Muhammadiyah, 2015b). Therefore, the Central Board of Muhammadiyah must provide a commercial land management strategy, ensuring the land plot is for social and corporate purposes and will raise funds to finance campaigns at all times. Because of the tremendous benefits of waqf land, waqf can be a viable option for eradicating poverty and unemployment if its benefits can be adequately maximised by optimising the population to utilise current waqf tools. The ummah can also be economically empowered to achieve good uses for the waqf.

Secondly, fundraising to manage land waqf is essential because Muhammadiyah is not a company that makes money but needs funding to progress and develop. During this time, funds to drive the social enterprise of Muhammadiyah came from Islamic banks, financing institutions, or some cooperation with the companies (Medias & Pratiwi, 2019b; Pimpinan Pusat Muhammadiyah, 2015b). Despite funding aid development, they have

not been sufficient to finance Muhammadiyah's activities. Some programs and activities in regions and branches have not worked best due to a lack of financial assistance. The Muhammadiyah still needs substantial financial support at all levels. The concept of integrated waqf is considered a source of internal funding for Muhammadiyah's social programs. Therefore, studying the idea of waqf with fund development strategies is necessary.

Thirdly, the professional nazir, Muhammadiyah, must also inevitably fix this. Muharrir Asy'ari (2017) stated that the Muhammadiyah waqf in Aceh, for whom waqf assets are only places of worship, and that nazirs lack knowledge and creativity in waqf management to be more productive. Moreover, waqf nazirs have yet to receive income based on their work. Three fundamental philosophies must be considered if we want to empower the Waqf productively. First is the prosperity principle, which means we are making nazir a profession that offers hope for those who graduate with the most well-being in the later years and the world. Second, as in Turkey, 5% of the waqf net income is allocated to the Waqf management board and the Bangladesh Waqf administration. Around 6% is earmarked for the Central Waqf Council of India. Third, the number of existing human resources is still limited, so the number of human resources should increase at the Muhammadiyah waqf. Muhammadiyah cannot rely solely on voluntary nazir to run existing waqf assets. It must begin by improving the quality of the nazir or hiring professionals who genuinely understand waqf and other issues, such as management, that can enhance waqf assets more productively.

Lastly, some waqf assets in Muhammadiyah have been traditionally managed to a less profitable extent and rarely empower the poor of mosques, *mushallas*, madrasahs, and orphans. Barriers only increase so that such waqf land's intangible assets, mostly still empty, can be optimised. The internal factors came from the waqf management, and external factors like the rigid regulation of the exchange of asset forms and less from the government's role in promoting waqf to solve poverty. The

government does not see waqf funds as a source of revenue supporting high economic growth.

The importance of practical results of professional management, transparent waqf administration, and complementary public investment is a crucial source of ongoing economic growth (Shaikh et al., 2017). A vision for change, the Council for Waqf Utilisation establishes Muhammadiyah 's asset management function as a waqf. Its assets are professional, transparent, accountable, and productively provide people with more significant benefits. The concept has been adopted by Kyai Haji Ahmad Dahlan, related to the principle of assets. Then, based on the requirements accepted as assets, which will provide benefits in the future, transactions in the past are regulated by the corporation (IASB,1997; FASB,2001; IAI,2009).

On the other hand, they have not adequately documented Society and how great an asset it is. In this case, the Central Board of Muhammadiyah and the Council for Waqf Utilisation have been working hard to develop Muhammadiyah's asset data system. One cause is that not all trust wealth is appropriately recorded at all levels of trust. However, the Council for Waqf Utilisation will continue collecting trust asset data.

On the other hand, they have not adequately documented *Persyarikatan* and its brand as prominent intangible assets. In this case, the Muhammadiyah Central Board and the *Majlis Wakaf dan Kehartabendaan* have been working hard to develop Muhammadiyah's asset data system. One limitation is completeness, in that not all of the trust's wealth is timely and appropriately recorded at all levels of the trust. However, *Majlis Wakaf and Kehartabendaan* will continue collecting trust asset data.

A Digital Asset Management (DAM) system is an alternative solution to solve that problem. A DAM system comprises the information system infrastructure required to help process data and records effectively and efficiently to utilise an organisation's digital assets effectively. It includes automatically importing digital assets into an easily searched, documented, transformed, edited, packaged, and distributed centralised repository. A DAM system's main administrative functions include tracking utilisation, asset-centred flow, automated system management, and enforcement of asset rights and

permissions (Fine & Johnson, 2005b). The implication is that the formulation of waqf desired by Muhammadiyah figures is practical and flexible (Medias et al., 2019). However, waqf in the Muhammadiyah organisation still uses the traditional system until now.

Furthermore, Muhammadiyah Waqf can further develop the concept of social-business management for fundraising. Several Muhammadiyah institutions have succeeded in applying the social business concept, such as the Muhammadiyah University of Malang, Yogyakarta Muhammadiyah University, Malang Aisyiyah Islamic Hospital, and so on. The source of raising capital and optimisation management of waqf institutions for developing digital waqf assets (Thaker, 2018). Hopefully, the digital revolution PBUH will be a significant leap in technological development, computing, and automation, providing opportunities to generate more innovations. It could redefine the concept of distance and contact between world populations and network them through an integrated, easy, and quick mechanism that can cut costs, increase utilisation, and multiply benefits. *Waqf* in Muhammadiyah can then be operated properly and systematically, technologically, enabling a higher sustainable impact.

3.7 FUTURE DIRECTIONS FOR MUHAMMADIYAH WAQF ORGANISATION

In 2023, the Council for Waqf Utilisation of the Central Board of Muhammadiyah succeeded in inputting data on more than 40 percent of *the Muhammadiyah Society's* land, which comes from waqf. Also, the grants and land purchases are included in the Muhammadiyah Asset Management System (SIMAM) data. The Council for Waqf Utilisation hopes to get support from Muhammadiyah Educational institutions throughout Indonesia, of which currently more than two-thirds come from waqf, from kindergartens to universities. The Basic Education Council can encourage collaboration to utilise Waqf through KISS (Consistent, Innovative, Synchronous, Synergy) with related councils such as the Council for Higher Education, Research, and Development (Diktilitbang); Council for Elementary, Secondary, and Non-formal Education (Dikdasmen PNF); Council for Economy, Business, and Tourism (MEBP); Council for

Environmental Preservation; Council for Public Health (MKU); Council for Social Welfare (MKS); and Council for Community Empowerment (MPM). The Council for Waqf Utilisation of the Central Board of Muhammadiyah is encouraged to carry out transformations in the management and utilisation of Waqf and play an active role in developing land assets belonging to the Muhammadiyah Organisation. The Chairperson of the Council for Waqf Utilisation (2023) revealed that this plenary meeting agreed on five superior programs for waqf organisation in Muhammadiyah for 2022-2027. Even though there are similarities with the previous period, several new programs are also included in this period's advanced strategies.

- i. Increasing the achievements of the inventory and certification of Muhammadiyah waqf land.

This program aims to ensure that all waqf land managed by Muhammadiyah is appropriately recorded and legally valid. Inventory of waqf land allows for more transparent and effective management, while certification provides legal protection for these assets. Collect data and information related to waqf land owned by Muhammadiyah throughout Indonesia and manage land certificates according to applicable provisions. With land certificates, the potential for disputes or legal problems can be minimised, and waqf land can be utilised more optimally for social activities.

- ii. Institutional strengthening by preparing several guidelines to strengthen nazir's institutions and conducting training to increase nazir's competence.

This program aims to improve the capacity and professionalism of nazir, namely the person or institution appointed to manage the waqf. By strengthening the institution of Nazir, waqf management will become more organised and efficient. Preparation of guidelines or manuals that make it easier for Nazir to carry out their duties, as well as training and workshops to improve Nazir's knowledge and skills in waqf management, including administration, accounting, and productive use of waqf.

- iii. The investment and cooperation division will collaborate strategically with various parties to utilise Waqf to make it more productive in rural and urban areas and develop creative fundraising programs based on digital technology.

This program aims to increase the productivity of land and waqf funds through collaboration with other parties and utilising digital technology to develop more modern and effective fundraising programs. Opening opportunities for collaboration with the government, companies, and other institutions to utilise waqf in various sectors, such as education, health, and infrastructure development. In addition, developing digital platforms to facilitate the collection and distribution of waqf funds, such as mobile applications or websites, allows the public to donate easily and quickly.

- iv. The advocacy division will increase its achievements in resolving land problems (disputes) both through litigation and non-litigation.

This program focuses on resolving waqf land disputes that can hinder the utilisation and management of the land. Dispute resolution will be done through legal channels (litigation), mediation, or negotiation (non-litigation). The advocacy division will work with lawyers, legal experts, and related institutions to resolve land disputes that may arise. If a peaceful resolution fails, a litigation approach will be taken, while a non-litigation resolution can be achieved through mediation or negotiation to reach an agreement that benefits all parties.

- v. In the cash waqf direction, they will optimise the financing of waqf land to make it more productive, such as financing the development of Muhammadiyah Social Enterprise (Amal Usaha Muhammadiyah), such as hospitals, schools, and mosques in several regions in Indonesia, including humanitarian warehouses for emergency disaster response.

This program focuses on utilising cash waqf funds to finance social and humanitarian projects managed by Muhammadiyah, such as hospitals, schools, mosques, and other facilities. The cash waqf funds collected will

fund various Muhammadiyah Social Enterprise (AUM) projects that aim to benefit the community directly. This includes building and managing public facilities and providing humanitarian assistance in the form of logistics warehouses for natural disasters.

These five programs support each other in strengthening the management and utilisation of waqf for the community's benefit. By improving the administration system and land management, increasing nazir's capacity, and expanding strategic cooperation with various parties, Muhammadiyah can increase the social impact of waqf. Meanwhile, resolving land disputes and optimising cash waqf for social projects will directly contribute to urban and rural communities.

3.8 SUMMARY

Muhammadiyah waqf organisation, tracing its historical roots and evolution. Muhammadiyah, founded by Kyai Haji Ahmad Dahlan in 1912, initially focused on education but gradually expanded its mission to include social welfare through waqf. The organisation established the *Majelis Wakaf dan Kehartabendaan* (later known as Council for Waqf Utilisation) to manage waqf assets such as land and cash. These assets are used for social services like healthcare and education. The waqf organisation operates under a structured system, including a Board of Sharia Supervisory and various departments handling legal, investment, and land utilisation tasks to ensure efficient and sharia-compliant management.

However, challenges persist, including bureaucratic inefficiencies, underutilised waqf land, and a lack of professional nazir (waqf managers). Despite managing significant assets across Indonesia, a portion of the waqf land remains idle, signalling the need for further development. To address these issues, Muhammadiyah aims to optimise waqf management through better certification, enhanced training for nazir, and strategic partnerships. Overall, Muhammadiyah's waqf system plays a critical role in enhancing social welfare, with efforts focused on long-term sustainability and community development. Utilising digital platforms for fundraising and expanding the

waqf's impact through social and economic empowerment initiatives is a pertinent game-changer that warrants an in-depth study.

Considering these ongoing challenges and opportunities, this study employs a mixed-methods approach, combining qualitative and quantitative research to evaluate the adoption of digital technology in managing waqf assets. By analysing the current state of Muhammadiyah's waqf system and exploring how digital platforms can enhance transparency, efficiency, and outreach, this study aims to provide insights into the potential for digital transformation in waqf management. Through interviews with key stakeholders and collecting relevant data, the research seeks to identify best practices and recommend strategies for optimising the role of digital technology in supporting the sustainable development of waqf assets. The findings are expected to contribute significantly to the broader discourse on modern waqf management and the role of technology in empowering social and economic initiatives.



CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

The mixed-method research design was applied in this study to construct a new waqf model in Muhammadiyah about using technology for proper management, both centralised and decentralised. This study also emphasised how technology can improve the Waqf's effective and efficient management. This study further examined the experts and specialists who work in the government, academic institutions, and other councils in Muhammadiyah organisations. Finally, this chapter describes the methodological procedures used to answer this study's research questions: research design, determining the sample size, research instrument, data source, data collection methods, and data analysis tools.

4.2 TYPES AND APPROACHES OF RESEARCH

4.2.1 Study Mixed Methods

This study adopted a mixed-method approach (Creswell, 1999) with an exploratory sequential design, where the qualitative phase precedes and informs the quantitative phase. An exploratory sequential design is a design method that combines two phases. Researchers started with qualitative data collection and analysis, followed by quantitative data collection and analysis, to test or generalise qualitatively early.

In context studies, the qualitative approach (Creswell, 2014) will be used, moreover, to explore the deep phenomenon of the legitimacy of technology management waqf and integration of social business in the Muhammadiyah Organisation. The beginning of the qualitative phase can give the base for the quantitative phase, which produces a hypothesis, creates an instrument, or determines intervention (Morgan, 2017). After the qualitative phase, the research will continue to the quantitative phase to test and generalise findings. The design used a qualitative

method to develop the size or instrument (Creswell, 2014). This allowed the researcher to develop more appropriate and relevant instruments for the context study.

Use an exploratory sequential design in the study. The aim is to obtain a comprehensive understanding of the phenomenon under study. This approach allows qualitative data to explore phenomena and quantitative data to explain relationships found in qualitative data (Morgan, 2017). By integrating qualitative and quantitative data, research can show the legitimacy of technology management waqf and social business integration in the Muhammadiyah Organisation. Method integration, both qualitative and quantitative, can produce more knowledge and complete what is required to inform theory and practice.

4.2.2 Case Study Approach

This study adopted the case study approach to investigate the legitimacy of technology management waqf and integration of social business in the context of the Muhammadiyah Organisation. A case study is a method of deep empirical investigation of a contemporary phenomenon in a real-world context, especially when the limitation between phenomenon and context is unclear (Stake, 1995). The case study approach was chosen because it allows the researcher to explore holistically how the Muhammadiyah organisation legitimises technology management waqf and integrates aspects of social business. A case study is not only a methodological choice but also an option about what will be researched, as appropriate for a complex topic study (Njie & Asimiran, 2014).

In a context study, this case study provides a possible deep understanding of processes, dynamics, and influencing factors, such as legitimacy, technology and integration of social business in management waqf. This approach made it possible for the researcher to capture complex situations accurately and explore various perspectives from the stakeholders' interests. Case studies can also use various data sources, including interviews, observations, and analysis documents, to give a rich and contextual depiction of the phenomenon under study (Creswell, 2017). This is very

relevant for understanding nuance and complexity, legitimacy, technology, and social business integration in the context of religious organisations like Muhammadiyah.

Further, the approach studies allow researchers to explore how the context of the Muhammadiyah organisation influences the legitimation and integration process. This is important because every organisation has unique characteristics that can influence how technology is adopted and how social and business integration is achieved. Using approach studies and case research, this aim is to produce a deep and contextual understanding of the legitimacy of technology management waqf and the integration of social business in the Muhammadiyah organisation. This understanding can give a valuable outlook for practice and theory in the field.

4.3 RESEARCH DESIGN

This study employed a mixed-method design, combining qualitative and quantitative approaches to collect and analyse data (Creswell, 1999). Also, it is insufficient to meet the research objectives. Mixed-method research is associated with the pragmatist approach as it focuses on the main research questions and their results (Morgan, 2017; Yardley & Bishop, 2011). Hence, the study expects to integrate qualitative and quantitative methods, or a mixed-method design, to provide detailed and comprehensive data to achieve the research objectives and answer questions.

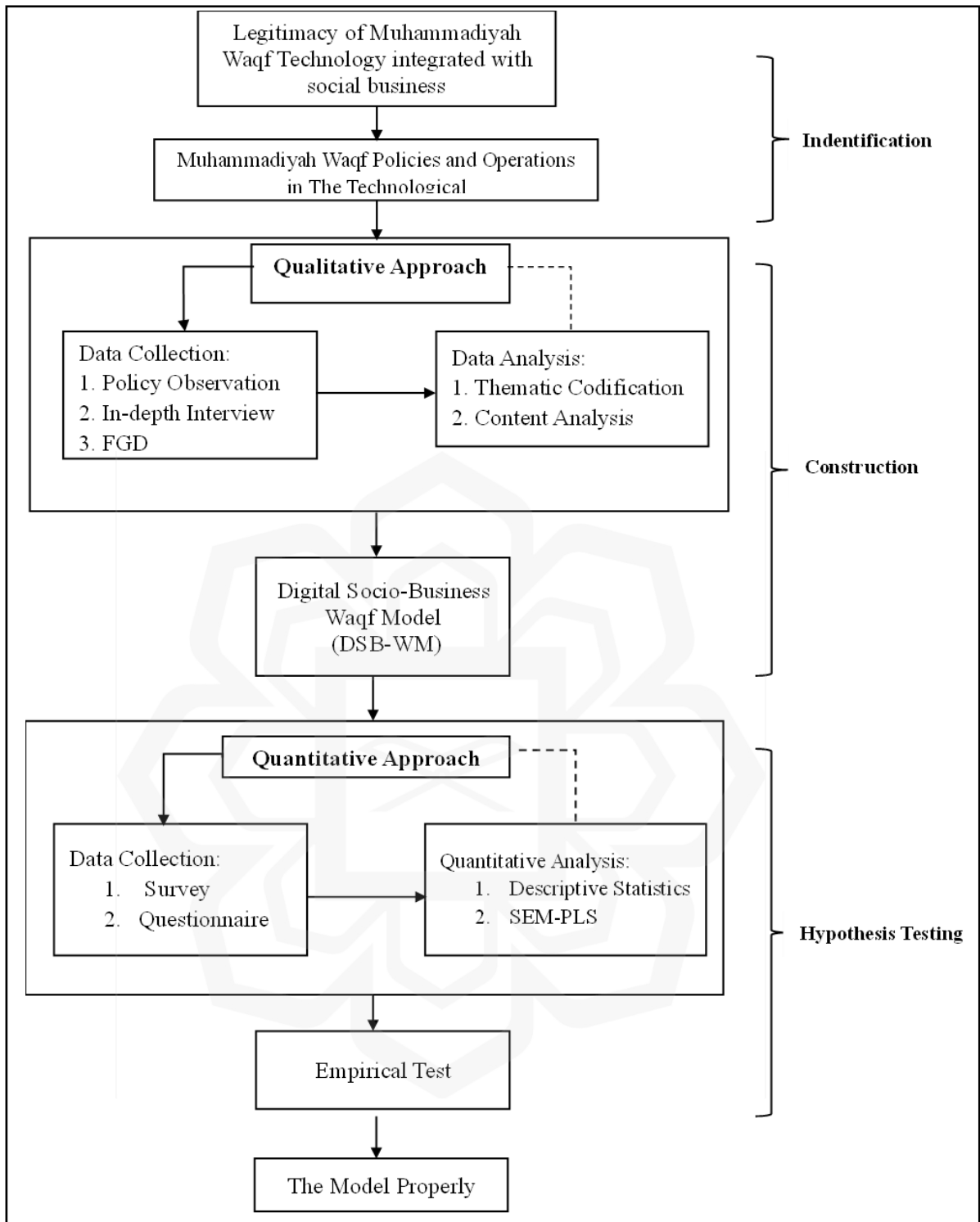


Figure 4.1 Research Design

The explanatory (sequential) design is a two-stage mixed-method design (Creswell, 1999). The researcher then collected qualitative data from participants who could explain these results to explore in-depth quantitative data. In this study, the focus

is on the quantitative aspects. Therefore, the explanatory design is a straightforward mixed-method design. This method is considered the most suitable approach as it attempts to discover the legitimation and acceptance of waqf technology management with social-business integration. Therefore, using both ways can provide detailed and comprehensive data and interpretation of data. There are three stages to complete the objective research: identification, construction, and hypothesis testing.

4.3.1 Stage I: Identification (Qualitative Method)

This stage aims to conduct a comprehensive review of the management function of Muhammadiyah waqf based on the attributes and criteria of management technology and to evaluate the adequacy of the existing framework, policies, and operations in supporting the implementation of a technology-based management system integrated with socio-business aspects. Specifically, this stage will examine the process of technological legitimacy that occurs within the framework (Research Question #1):

Are the existing Muhammadiyah Waqf framework, policies, and operations adequate as factors to consider for a technology management system within the integrated socio-business system?

Through this analysis, the study focuses on an in-depth understanding of the potential for centralisation, decentralisation, or integration models in the era of digital assets and identifying the extent to which current managerial elements are ready to support the adoption of legitimate technology. This objective explores the potential for technological integration and how technological legitimacy can be built and maintained in the context of waqf management in Muhammadiyah.

4.3.1.1 Data Collection

Secondary data sources are data that have been previously collected for purposes different from the current research (Creswell, 2017). This data includes various types of information that are already available, such as previous research reports, journal articles, books, public statistics, and institutional documents. Using secondary data

helps researchers enrich the analysis with historical references and provide additional context to support the research results.

i. Literature Review:

Review academic literature and case studies on waqf management (Njie & Asimiran, 2014), including technology adoption in other institutions. Focus on frameworks, policies, and operations relevant to digital transformation.

ii. Policy Observation:

Conduct observations of Muhammadiyah waqf document applicable policies, procedures, and practices (Yanow, 2007) to identify management attributes that support technology adoption and system readiness in implementing technology-based management.

iii. Document Analysis:

Review official Muhammadiyah documents related to waqf management, such as policy reports and operational guidelines, to evaluate policy readiness to support technology's legitimacy in waqf management.

4.3.1.2 Content Analyses

Qualitative data (Bougie & Sekaran, 2020) collected from the literature review and observations were analysed through content analysis (Wooldridge, 2003), which examined the content of articles, policies, and reports of Muhammadiyah Waqf's management to map how technology policies are formalised and implemented.

This analysis evaluates the strengths and weaknesses of the existing Muhammadiyah waqf management model (Chapter Five). Historically, Muhammadiyah has managed waqf through a traditional approach with a strong emphasis on compliance with sharia principles and a focus on optimising waqf assets for social interests. Although this management model has succeeded in building a stable and established structure, its weaknesses arise regarding adaptation to technology and limited operational efficiency. This analysis also explores the readiness of the

Muhammadiyah waqf system to adopt digital technology by highlighting several important attributes. Regarding governance, Muhammadiyah has a strong structure but still needs modernisation to support implementing a technology-based system. Stakeholder engagement and digital literacy are important challenges that must be addressed to ensure the success of digital transformation in waqf management.

4.3.1.3 Result

The results of this identification stage are presented in Chapter Five, Muhammadiyah Waqf Policies and Operations in the Technological. This study identifies important factors for technology adoption in Muhammadiyah waqf management, namely system centralisation or decentralisation, governance structure, and readiness for digital transformation. System centralisation or decentralisation is needed to improve the efficiency and expansion of waqf management, while a strong governance structure supports optimal technology adoption.

This study also highlighted Muhammadiyah's readiness to carry out digital transformation, especially regarding human resources, technology infrastructure, and appropriate policies. It found challenges and opportunities that affect the technology integration process in social-business-based waqf management. These initial findings form the basis for the next research stage, which will test these factors through a quantitative approach to better understand the potential for technology adoption in Muhammadiyah waqf management.

4.3.2 Stage II: Construction (*Qualitative Method*)

The research stage aimed to comprehensively understand integrating technology with social business practices in the Muhammadiyah waqf management. This stage played an important role in examining the RQ 2:

Which factors influence Muhammadiyah's socio-business technology waqf model construction in the digital asset era?

This stage focused on collecting qualitative data, which will be the basis for developing the Digital Socio-Business Waqf Model (DSB-WM). This model is expected to be implemented in the management of the Muhammadiyah waqf to increase the effectiveness and desires of socio-economic organisations.

4.3.2.1 Data Collection

This study used a qualitative data collection method to gain in-depth insights. The researcher collected primary data directly to answer specific research objectives (Bougie & Sekaran, 2020). This method allows researchers to gain a more comprehensive understanding of the phenomenon being studied by collecting information from relevant and authentic sources.

i. In-depth Interviews

In-depth interviews (Kvale, 2011) will explore informants' experiences in waqf management in Muhammadiyah while identifying challenges and opportunities for legitimacy technology integration with social business in waqf operations. According to Bougie and Sekaran (2020), the purposive sampling technique was deliberately chosen to determine individuals or cases with the most potential to provide valuable information following the study's objectives. The data collection process was carried out using structured questions (Kvale, 2011), where a list of previously prepared questions was consistently asked to each respondent. This approach makes it easier for researchers to compare answers and analyse data more systematically.

Table 4.1 Interview Informants

No	Councils/Institutions	Position	Objective
1	Council for Waqf Utilisation of the Central Board of Muhammadiyah	Chairperson	Reviewing in-depth information about strategies, policies, and implementation management in Muhammadiyah, especially those related to technology legitimacy and social business integration.
2	Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Jakarta	Chairperson	Review in-depth information on implementation policy management in the regional Jakarta, primarily related to technology and social business integration.
3	Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Yogyakarta	Vice Chairperson	Review in-depth information on implementation policy management at the regional Yogyakarta, primarily related to technology and social business integration.
4	Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah	Head of Development and Organisation	Understanding the perspective of Waqf Fiqh is mainly related to the validity of using technology and integrating social business in Waqf management in Muhammadiyah.
5	PT Surya Finansia Utama (SFU) (Muhammadiyah-owned Enterprises (BUMM) in financial technology)	President director	Exploring the potential and challenges of implementing the latest technology in waqf management in Muhammadiyah.
6	Council for Economy, Business, and Tourism of the Central Board of Muhammadiyah	Vice Chairperson	Acquire deep information about the role and contribution of each Council in the development and management of Muhammadiyah waqf, particularly related to integration technology and aspects of social business.

ii. **Focus Group Discussions (FGDs)**

Group Discussion (FGD) aimed to bring together various parties (Krueger & Casey, 2014) related to the management of waqf in Muhammadiyah, including the councils from the Central Board of Muhammadiyah, namely the waqf utilisation council, economic council and members of the

Jaringan Saudagar Muhammadiyah; treasurer of the Centre Board of Muhammadiyah; Lazismu is an Amil zakat institution; LPPK is a financial guidance and academic institution in Muhammadiyah; and academics as waqf scholars (9 people). FGDs are organised around the theme of **"Sustainability of Finance through Social Business"** to understand how social business models can support the financial sustainability of Muhammadiyah waqf. Participants discussed the potential benefits and challenges of blending social business practices with waqf management.

iii. **Seminar on the Challenges of Muhammadiyah in the Digital Era**

The Seminar on the Challenges of Muhammadiyah in the Digital Era addressed obstacles to technology adoption, such as infrastructure gaps, human resource competence, and organisational readiness. It examined steps for integrating technology to enhance transparency, efficiency, and legitimacy in waqf management and analysed the opportunities and challenges of digitalisation and its impact on legitimacy.

iv. **Report on the 2022 National Work Meeting 2022 of The Council for Waqf Utilisation**

The 2022 National Work Meeting Report of the Council for Waqf Utilisation provided insights into the challenges faced by Muhammadiyah in managing waqf, including structural, coordination, and policy issues. The findings from this report were explored to assess their alignment with Muhammadiyah's strategic goals for waqf development. Based on the identified challenges, strategic recommendations can be formulated to help Muhammadiyah address these issues, ensuring that technology is integrated effectively and supports the legitimacy of waqf management.

4.3.2.2 Analyses

Qualitative data collected through this method were analysed using N-Vivo software for thematic coding (Chapter Six). This approach allowed for the identification of recurring themes, patterns, and insights related to integrating technology into waqf management and the role of social business in enhancing financial sustainability.

i. Thematic Coding:

Thematic coding aids in systematically categorising the qualitative data into key themes, including the following:

1. The legitimacy of technology in waqf management
2. The adoption of technology in waqf management
3. The integration of social businesses for sustaining waqf management
4. The challenges and barriers to adopting digital tools in Muhammadiyah waqf management
5. The opportunities and innovations in digital waqf management for Muhammadiyah

ii. Content Analysis:

Content analysis at this stage focuses on identifying significant factors and attributes that contribute to the success of technology integration in waqf management and its impact on the effectiveness and efficiency of such management. The identified factors will serve as the basis for developing hypotheses in the following research stage to deepen understanding of the relationship between technology and social business practices in the Muhammadiyah waqf.

4.3.2.3 Result

The analysis in Stage II resulted in the construction of the Digital Business Social Waqf Model (DSB-WM), which integrates key findings related to the adoption of technology and social business practices in the management of Muhammadiyah waqf. The management of Muhammadiyah waqf, which has focused on optimising waqf assets for social and religious interests, has received a significant boost through digital innovation that is expected to increase efficiency and transparency. This model identifies potential pathways to improve the effectiveness of Muhammadiyah waqf management through the application of digital technology and highlights key factors that determine the successful implementation of the model. These findings contribute strategically to designing more innovative and sustainable waqf management in the digital era.

4.3.3 Stage III: Hypothesis testing (*Quantitative Method*)

This stage aimed to empirically test the factors that influence the adoption of technology and the performance of the digital waqf management system in Muhammadiyah. Specifically, this stage will assess the RQ 3:

What are the significant factors influencing the potential performance of the Digital Waqf model/fund?

Based on the findings identified in the previous qualitative stage, this study evaluated the correlation between these factors and the overall performance of waqf management. This test was expected to provide deeper insight into how technology adoption contributes to the effectiveness, efficiency, and sustainability of Muhammadiyah waqf management in the digital era.

4.3.3.1 Data Collection: Survey & Questionnaire

A structured questionnaire (Bougie & Sekaran, 2020) was distributed to respondents. The **purposive sampling** technique is a **non-probability sampling technique** in which the researcher intentionally selects participants based on specific characteristics,

criteria, or knowledge that are most relevant to the research objectives (Bougie & Sekaran, 2020), selecting respondents from Muhammadiyah Social Enterprise (AUM) managers and organisational administrators directly involved in waqf management. The survey was designed to measure respondents' perceptions of key factors identified in the qualitative phase (Phases I & II), specifically related to the potential of the Digital Business Social Waqf Model (DSB-WM) and its impact on waqf management performance. The indicators in this questionnaire were based on the technology acceptance model framework, namely the Technology Acceptance Model (TAM) (Davis, 1993). The Theory of Planned Behaviour (TPB) evaluates how perceived benefits, ease of use, and attitudes and intentions to use digital technology influence technology adoption in Muhammadiyah waqf management.

Table 4.2 Indicators of the Questionnaire

Variable	Indicators	Items
Independent Variables	Perceived Usefulness (PU)	Waqf management technology increases my work efficiency (PU1).
		This technology makes it easier for me to manage waqf (PU2).
		I find this helpful technology in my job (PU3).
		Using this technology improves my productivity in waqf management (PU4).
		This technology allows me to manage waqf more accurately (PU5).
		This technology helps me make better decisions in waqf management (PU6).
	Perceived Ease of Use (PEOU)	I find it easy to learn how to use this waqf management technology (PEOU1).
		My interaction with this technology is clear and understandable (PEOU2).
		Overall, this technology is easy to use (PEOU3).
		I can easily find the necessary information using this technology (PEOU4).
		This technology has a user-friendly interface (PEOU5).
		I do not experience difficulties operating this technology's features (PEOU6).
	Attitude Towards Use (ATU)	Using waqf management technology is a good idea (ATU1).
		I have a positive attitude towards using this technology (ATU2).
		I believe using this technology will benefit the organisation (ATU3).

Variable	Indicators	Items
		I enjoy using this technology in my work (ATU4).
		Using this technology makes my job more enjoyable (ATU5).
		I am enthusiastic about exploring new features of this technology (ATU6).
	Subjective Norms (SN)	People who are important to me think I should use this technology (SN1).
		The leadership of Muhammadiyah supports using waqf management technology (SN2).
		My colleagues in the organisation encourage using this technology (SN3).
		Experts in the field of waqf recommend using this technology (SN4).
		The public has a positive view of using technology in waqf management (SN5).
		This technology is considered best practice in the waqf management community (SN6).
	Perceived Behavioural Control (PBC)	I have the necessary resources to use this technology (PBC1).
		I have sufficient knowledge to use waqf management technology (PBC2).
		I am confident I can overcome obstacles in using this technology (PBC3).
		I have access to training or technical support if needed (PBC4).
		I can integrate this technology into my work routine (PBC5).
		I can use this technology without assistance from others (PBC6).
Moderating Variables	Technological Legitimacy (TL)	The use of technology in waqf management aligns with Islamic principles (TL1).
		The Muhammadiyah community accepts this technology as a legitimate tool for managing waqf (TL2).
		This technology enhances transparency and accountability in waqf management (TL3).
		The use of this technology is in line with recent fatwas on waqf management (TL4).
		This technology helps maintain the integrity and sanctity of waqf assets (TL5).
		This technology supports the shariah objectives in waqf management (TL6).
Dependent Variables	Intention to Use (IU)	I intend to use waqf management technology in my work (IU1).
		I plan to continue using this technology in the future (IU2).
		I will recommend using this technology to my colleagues (IU3).

Variable	Indicators	Items
		I intend to increase my use of this technology in my tasks (IU4).
		I will try new features of this technology when they become available (IU5).
		I plan to encourage the adoption of this technology throughout the organisation (IU6).
	Actual Use of Technology (AUT)	I frequently use waqf management technology in my daily work (AUT1).
		I use most of the features offered by this technology (AUT2).
		I rely on this technology to manage waqf (AUT3).
		I use this technology to generate reports and analyse waqf (AUT4).
		I use this technology to communicate with waqf stakeholders (AUT5).
		I integrate this technology with other systems in the organisation (AUT6).
	Social-Business Integration (SBI)	This technology helps integrate social and business aspects in waqf management (SBI1).
		This technology improves business efficiency while maintaining social values (SBI2).
		This technology facilitates collaboration between social and business units in the Muhammadiyah organisation (SBI3).
		This technology helps balance social goals and financial returns in waqf management (SBI4).
		This technology enhances the social impact of waqf investments (SBI5).
		This technology enables integrated reporting between social and business aspects of waqf management (SBI6).

4.3.3.2 Analyses

The results of this analysis (Chapter Seven) provided an in-depth view of how technology integration can be optimised in the Muhammadiyah waqf management system and which factors are most significant in supporting the successful implementation of the Digital Business Social Waqf Model (DSB-WM).

i. Descriptive Statistics:

Descriptive statistics summarise respondents' characteristics, such as age, education level, and position in Muhammadiyah, regarding technology adoption in waqf management. Measurements such as mean, median, and standard deviation will help describe the distribution of respondents' perceptions of key factors, such as ease of use of technology, perceived benefits, and organisational readiness to adopt digital technology.

ii. Structural Equation Modelling - Partial Least Squares (SEM-PLS)

SEM-PLS is a statistical approach to analysing complex and multivariate relationships between variables. This approach was chosen because of its ability to handle structural models with many indicators and latent variables. Some of the analysis steps that will be carried out include:

1. **Test of Relationships Between Variables:** SEM-PLS allows testing the relationship between key factors identified in the previous stages (legitimacy, technology integration, and socio-business models) and how these factors affect waqf performance.
2. **Evaluation of Significance:** This approach also allows for evaluating the significance of the relationship between variables to identify which factors have the most significant influence on the adoption of digital technology in Muhammadiyah waqf management.
3. **Direct and Indirect Effects:** SEM-PLS can also analyse technology adoption's direct and indirect effects on waqf management performance. This includes evaluating technology's impact on operational efficiency, transparency, and waste asset growth.
4. **Model Validation:** The validity and reliability of the measurement model will be tested through confirmatory factor analysis to ensure that the indicators used correspond to the latent variables being measured.

4.3.3.3 Hypothesis

Hypothesis, a temporary statement that can be tested through observation and experimentation (Bougie & Sekaran, 2020), is the leading guide in this study to explore the relationship between variables that influence technology adoption in waqf management. This study proposes hypotheses, such as the influence of perceptions on the ease of use of technology and its benefits, to measure the extent to which these factors influence the intention and actual use of technology. In addition, testing this hypothesis also aims to identify the most significant factors in determining the success of socio-business integration and adoption of digital technology in Muhammadiyah waqf management. The results of this test will provide deeper insights and create a strong foundation for developing a more effective and sustainable Digital Business Social Waqf Model (DSB-WM).

The hypotheses in this study were developed by integrating established theories and prior research. The Technology Acceptance Model (TAM) (Davis, 1993) and the Theory of Planned Behaviour (Ajzen, 1991) provide the foundation for constructs such as perceived usefulness, perceived ease of use, subjective norms, and perceived behavioural control in predicting behavioural intention and actual technology adoption. The Diffusion of Innovation Theory (Rogers, 2003) supports the inclusion of innovation-related attributes in the adoption process. Furthermore, Legitimacy Theory (Suchman, 1995) and Social Business Integration Theory (Porter & Kramer, 2006; Yunus, 2023) establish the importance of societal acceptance, shariah compliance, and stakeholder trust as determinants of sustainable adoption. Empirical studies on Islamic social finance and waqf management affirm that users' perceptions and institutional legitimacy are critical in driving technology adoption and socio-business integration. Therefore, the hypotheses were formulated to test direct and mediated relationships among these constructs.

Technology Legitimacy (TL) is positioned as a mediating variable because legitimacy bridges individual perceptions and institutional adoption outcomes. While factors such as perceived behavioural control, ease of use, usefulness, and subjective norms influence users' attitudes and intentions, these effects are insufficient without the perception that the technology is legitimate regarding shariah compliance,

organisational governance, and societal acceptance. In the context of Muhammadiyah's waqf management, legitimacy ensures that technology adoption is technically feasible and religiously and socially acceptable, thereby reinforcing its impact on actual use and the success of socio-business integration. Thus, TL is hypothesised to mediate the relationship between antecedent factors and the dependent variables, highlighting its critical role in strengthening adoption and sustainability.

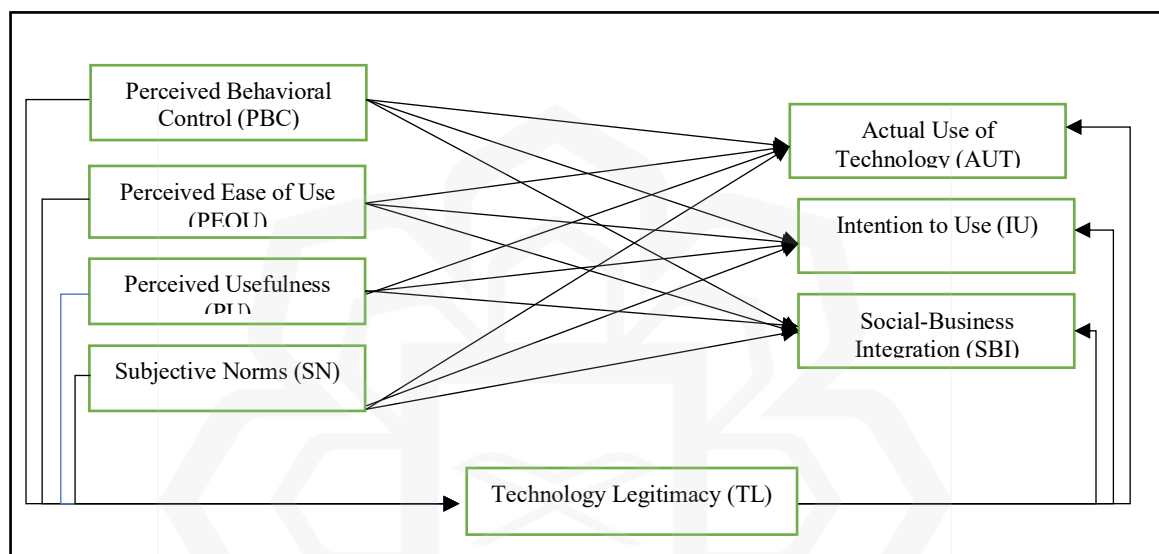


Figure 4.2 Hypothesis Framework

Based on Figure 4.2, the research hypothesis was formulated to test the relationship between the **independent variables** (X), namely perceived behavioural control (PBC), perceived ease of use (PEOU), perceived usefulness (PU), subjective norms (SN), and **dependent variable** (Y), against the actual use of technology (AUT), intention to use (IU), and social-business integration (SBI). This study introduced technology legitimacy (TL) as an **intermediary variable**, which is assumed to strengthen the relationship between independent and dependent variables.

i. **Perceived Behavioural Control (PBC)**

H1: Perceived Behavioural Control (PBC) positively and significantly influences the Actual Use of Technology (AUT).

- H2: Perceived Behavioural Control (PBC) positively and significantly influences Intention to Use (IU).
- H3: Perceived Behavioural Control (PBC) positively and significantly influences Social-Business Integration (SBI).
- H4: Perceived Behavioural Control (PBC) positively and significantly influences Technology Legitimacy (TL).
- ii. **Perceived Ease of Use (PEOU)**
- H5: Perceived Ease of Use (PEOU) positively and significantly influences Actual Use of Technology (AUT).
- H6: Perceived Ease of Use (PEOU) positively and significantly influences Intention to Use (IU).
- H7: Perceived Ease of Use (PEOU) positively and significantly influences Social-Business Integration (SBI).
- H8: Perceived Ease of Use (PEOU) positively and significantly influences Technology Legitimacy (TL).
- iii. **Perceived Usefulness (PU)**
- H9: Perceived Usefulness (PU) positively and significantly influences the Actual Use of Technology (AUT).
- H10: Perceived Usefulness (PU) positively and significantly influences Intention to Use (IU).
- H11: Perceived Usefulness (PU) positively and significantly influences Social-Business Integration (SBI).
- H12: Perceived Usefulness (PU) positively and significantly influences Technology Legitimacy (TL).
- iv. **Subjective Norms (SN)**
- H13: Subjective Norms (SN) positively and significantly influence the Actual Use of Technology (AUT).
- H14: Subjective Norms (SN) positively and significantly influence Intention to Use (IU).
- H 15: Subjective Norms (SN) positively and significantly influence Social-Business Integration (SBI).

H16: Subjective Norms (SN) positively and significantly influence Technology Legitimacy (TL).

v. **Technology Legitimacy (TL)**

H17: Technology Legitimacy (TL) positively and significantly influences the Actual Use of Technology (AUT).

H18: Technology Legitimacy (TL) positively and significantly influences Intention to Use (IU).

H19: Technology Legitimacy (TL) positively and significantly influences Social-Business Integration (SBI).

vi. **Mediating Hypotheses**

H20: Perceived Behavioural Control (PBC) positively and significantly influences the Actual Use of Technology (AUT) through Technological Legitimacy (TL).

H21: Perceived Ease of Use (PEOU) positively and significantly influences the Actual Use of Technology (AUT) through Technological Legitimacy (TL).

H22: Perceived Usefulness (PU) positively and significantly influences the Actual Use of Technology (AUT) through Technological Legitimacy (TL).

H23: Subjective Norms (SN) positively and significantly influence the Actual Use of Technology (AUT) through Technological Legitimacy (TL).

H24: Perceived Behavioural Control (PBC) positively and significantly influences Intention to Use (IU) through Technological Legitimacy (TL).

H25: Perceived Ease of Use (PEOU) positively and significantly influences Intention to Use (IU) through Technological Legitimacy (TL).

H26: Perceived Usefulness (PU) positively and significantly influences Intention to Use (IU) through Technological Legitimacy (TL).

H27: Subjective Norms (SN) positively and significantly influence Intention to Use (IU) through Technological Legitimacy (TL).

H28: Perceived Behavioural Control (PBC) positively and significantly influences Social-Business Integration (SBI) through Technological Legitimacy (TL).

H29: Perceived Ease of Use (PEOU) positively and significantly influences Social-Business Integration (SBI) through Technological Legitimacy (TL).

H30: Perceived Usefulness (PU) positively and significantly influences Social-Business Integration (SBI) through Technological Legitimacy (TL).

H31: Subjective Norms (SN) positively and significantly influence Social-Business Integration (SBI) through Technological Legitimacy (TL).

Overall, there were 31 hypotheses, of which 12 are mediation hypotheses that emphasise the important role of Technology Legitimacy as a mediator in technology adoption and socio-business integration. Organisations seeking to increase technology adoption should focus on increasing perceived control, usefulness, and social influence, as these factors contribute significantly to users' behavioural intentions and actual technology adoption.

4.3.3.4 Result

Chapter Seven will present the results of this analysis in detail. Empirical findings generated from model testing using Structural Equation Modelling Partial Least Squares (SEM-PLS) will validate the Digital Social-Business Waqf Model (DSB-WM) while revealing significant factors that drive the legitimacy of digital technology adoption in Muhammadiyah waqf management. This analysis aimed to identify which factors most significantly influence successful technology implementation.

In addition, this empirical test also served as a performance assessment tool. By measuring the contribution of each factor to Muhammadiyah Waqf's performance, this analysis provides practical insights into how the digital waqf model can improve efficiency, accountability, and legitimacy in waqf management. These insights will help

optimise overall waqf management while providing strategic guidance for more sustainable digital implementation.

4.3.4 Stage IV: Conclusion and Recommendation

After all stages of research were completed, this research produced a comprehensive model of Muhammadiyah waqf management that combines technology with social business practices. This model provides practical recommendations to improve legitimacy and efficiency in Muhammadiyah waqf management in the digital era. The structured approach used in this research includes exploring waqf governance, technology adoption, empirical testing of waqf models, and developing a digitally integrated waqf management system. The results of this research are expected to be a strategic guideline for Muhammadiyah in improving its waqf management performance through digital innovation.

4.4 DATA ANALYSIS TOOLS

The study used two analysis tools to process qualitative and quantitative data, as appropriate, using a mixture of approaches.

4.4.1 Qualitative Data Analysis

NVivo is a qualitative data analysis software designed to help researchers manage, organise, and analyse unstructured data such as interviews, focus groups, field notes, and documents (Chatzopoulou, 2023). The software supports various data formats, including text, audio, video, and images, allowing qualitative analysis to be conducted efficiently and systematically.

One of NVivo's main advantages is its ability to facilitate the coding process, which involves grouping data based on specific themes, categories, or concepts (Chatzopoulou, 2023). This feature allows researchers to identify patterns,

relationships, and meanings behind complex data. In addition, NVivo also provides visualisation tools, such as graphs, thematic maps, and matrices, which help researchers present their findings more clearly and attractively (Welsh, 2002). For example, using NVivo in qualitative data analysis can improve the accuracy of identifying themes and patterns in data, especially when data comes from multiple sources. It also emphasises the importance of NVivo in supporting consistent and organised analysis, especially in research involving multiple participants or documents.

This study focused on identifying factors that influence Muhammadiyah's adoption of the digital social business waqf model, which includes social, technological, economic, and institutional aspects. The complexity of data derived from various sources, such as interviews, focus group discussions, and documents, requires an analysis tool to organise and process data effectively. Therefore, NVivo was chosen to support the analysis process for the following reasons:

i. Ability to Manage Complex Qualitative Data

NVivo is designed to manage data from various formats, such as text, audio, video, and documents (Edwards-Jones, 2014). In this study, the data collected included interviews with waqf managers, focus group discussions with Muhammadiyah members, and policy documents and reports. NVivo allows all this data to be integrated into one platform, making the analysis process more manageable. In addition, NVivo helps keep the data organised and easily accessible, which is important for research with large data volumes.

ii. Facilitating In-depth Thematic Analysis

The waqf model involves various factors, such as community perception, technological innovation, and policy support. NVivo allows researchers to conduct a systematic thematic analysis, identifying key themes from the data. NVivo's coding feature makes it easy to group information based on specific themes, categories, or factors (Chatzopoulou, 2023), such as

"technological challenges" or "government support," so relevant patterns can be discovered more quickly.

iii. **Improving the Accuracy and Transparency of the Analysis Process**

NVivo automatically documented every step in the analysis process (Welsh, 2002). Researchers can retrace the coding or data analysis process, making the research results more transparent and accountable. This is important for multidimensional studies such as digital waqf adoption, where the accuracy of the analysis dramatically affects the quality of the conclusions.

iv. **Visualisation Features to Understand Relationships Between Factors**

NVivo provides visualisation tools, such as thematic maps and relationship diagrams (Jackson & Bazeley, 2019), making it easier for researchers to understand the interrelationships between various factors influencing digital waqf adoption. For example, the relationship between "waqif perception" and "technology adoption" can be visualised to provide a clearer picture of the dynamics of the adoption process.

In this study, NVivo supports systematic, comprehensive, and detailed analysis. Its advanced features allow researchers to identify important factors influencing Muhammadiyah's adoption of the digital social business waqf model while providing deeper insights into the opportunities and challenges.

4.4.2 Quantitative Data Analysis

SEM-PLS (Partial Least Squares - Structural Equation Modelling) is a variance-based statistical method widely used in quantitative research to model complex relationships between latent and measured variables (Hair et al., 2021). This method has the advantage of modelling complex relationship structures and works well on small to large datasets, even when there is non-normally distributed or missing data (Sarstedt et

al., 2019). In addition, PLS-SEM allows for more stable parameter estimation through bootstrapping techniques so that the results obtained can still be interpreted validly even though the number of samples is limited (Preacher & Hayes, 2008). There are some of the main functions of SEM-PLS (Hair et al., 2021):

- i. **Confirmatory Factor Analysis (CFA):** SEM-PLS allows researchers to test construct validity through Confirmatory Factor Analysis (CFA), a test of indicators supporting a latent construct. CFA is used to check whether the measurements used can represent the theoretical concept to be tested, so that it can confirm whether the observed variables support the latent factors predicted in the model.
- ii. **Path Analysis:** SEM-PLS allows path analysis, which identifies causal relationships between variables in a structural model. Through path analysis, researchers can examine how key factors such as technology adoption, social business practices, and waqf management models affect waqf management performance. The results of path analysis help researchers understand the direction and strength of influence between hypothesised variables.
- iii. **Structural Equation Modelling:** SEM-PLS tests complex theoretical models involving several latent constructs and measurement indicators. This method allows researchers to analyse and validate the proposed theoretical model and evaluate various theoretical assumptions in technology-based waqf management.

The advantages of SEM-PLS include good integration with SPSS, the ability to handle missing data with advanced methods, and comprehensive and easy-to-interpret outputs (Hair et al., 2021). In the context of research on Muhammadiyah waqf management, SEM-PLS was used for various purposes, including:

- i. Confirming the Conceptual Model:

SEM-PLS allows testing a conceptual model of factors influencing the effectiveness of technology-based waqf management integrated with social

business practices. This conceptual model is based on qualitative findings from the previous stages and will be tested empirically.

ii. Analysing the Relationship Between Technology Adoption and Waqf Management Performance:

This study uses SEM-PLS to test the extent to which the adoption of digital technology correlates with increased performance in Muhammadiyah waqf management. This analysis will identify key variables that influence the success of technology implementation in waqf management.

iii. Evaluating Direct and Indirect Effects:

SEM-PLS also allows the analysis of technology adoption's direct and indirect effects on waqf management performance. This analysis will provide deeper insight into digital technology-based waqf management dynamics.

Overall, SEM-PLS offers the flexibility, reliability, and analytical power needed to test this study's digital technology-based waqf management model and provides important contributions to developing more effective Muhammadiyah waqf management strategies in the digital era. To ensure the robustness of the SEM-PLS analysis in testing the social business integrated waqf management technology model in Muhammadiyah, the sample size was carefully calibrated to meet the methodological requirements.

In the context of this study, the PLS-SEM approach is chosen due to its ability to examine complex causal relationships among eight latent variable constructs, namely Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Subjective Norms (SN), Perceived Behavioural Control (PBC), Technology Legitimacy (TL), Intention to Use (IU), Actual Use of Technology (AUT), and Social-Business Integration (SBI), consisting of 4 independent variables, 1 mediating variable, and 3 dependent variables. Considering the theoretical basis for minimum sample size, Hair et al. (2017) recommend the **10-times rule**, which requires at least ten times the number of indicators

leading to a single construct to ensure adequate sample size for PLS-SEM analysis. Additionally, the **Minimum R-squared Method** in SEM-PLS determines the minimum required sample size. This method considers the significance level (5%), R-squared value (predictive power), and the number of constructs in the model. This approach refers to the assumption that the higher the R-squared, the greater the predictive power of the model, so a smaller sample may still be sufficient to produce a valid result. Assuming an R-squared value of 0.5 (moderate predictive power), the minimum sample required is **54 respondents** (Table 4.3) (Cohen, 1992). This measure met the requirements for SEM-PLS analysis, where the stability of estimating relationships between constructions can be achieved with this minimal sample.

Table 4.3 Sample Size Recommendation in PLS-SEM for a Statistical Power of 80%.

Maximum number of arrows pointing at a construct	Significance Level											
	1%				5%				10%			
	Minimum R ²				Minimum R ²				Minimum R ²			
	0.10	0.25	0.50	0.75	0.10	0.25	0.50	0.75	0.10	0.25	0.50	0.75
2	158	75	47	38	110	52	33	26	88	41	26	21
3	176	84	53	42	124	59	38	30	100	48	30	25
4	191	91	58	46	137	65	42	33	111	53	34	27
5	202	98	62	50	147	70	45	36	120	58	37	30
6	217	103	66	53	157	75	48	39	128	62	40	32
7	228	109	69	56	166	80	51	41	136	66	42	35
8	238	114	73	59	174	84	54	44	143	69	45	37
9	247	119	76	62	181	88	57	46	150	73	47	39
10	256	123	79	64	189	91	59	48	156	76	49	41

4.5 SUMMARY

This chapter primarily examines the research framework and methodology to answer this study's research questions. A mixed method (qualitative and quantitative) will be applied to collect and analyse the data. The chapter also evaluates the construction of the research instrument to collect and analyse data. Lastly, SEM-PLS, a tool for analysis, was used to examine the new model.

CHAPTER FIVE

MUHAMMADIYAH WAQF POLICIES AND OPERATIONS IN THE TECHNOLOGICAL

5.1 INTRODUCTION

This chapter presents the analysis results related to Research Question #1. The discussion critically reviews relevant academic literature and policy documents to identify and evaluate Muhammadiyah Waqf's management policies and operations with technology implementation. This analysis aims to understand how these policies and practices support technology integration in Waqf management and explore their implications for the effectiveness and sustainability of Waqf Asset Management in Muhammadiyah. The discussion covers the organisational structure, administrative mechanisms, and waqf asset management strategies. By integrating technology, such as the Muhammadiyah Asset Management Information System (SIMAM) and WaqfMu, it is hoped that waqf management can be carried out more transparently, efficiently, and responsibly. In addition, this chapter explores the strengths and weaknesses of the waqf management framework faced by Muhammadiyah. Through in-depth content analysis to strengthen the contribution of waqf to sustainable development in Indonesia. Lastly, this chapter highlights the shariah governance concept (Choudhury & Hoque, 2006), the theory of non-profit organisations (Salamon & Anheier, 1992), stakeholder theory (Freeman, 1984), and socio-business integration (Yunus, 2023) to evaluate the Muhammadiyah's readiness for adopting technology in Muhammadiyah Waqf management. This discussion provides a comprehensive view of Muhammadiyah's efforts to transform waqf management into a more modern and relevant approach.

The following documents were primary sources for assessing the existing Muhammadiyah waqf framework, policies, and operations. They evaluated the adequacy and sufficiency of these elements as key requirements to legitimise the implementation of a technology-based management system that integrates social and business aspects (RO 1).

Table 5.1 Waqf Management Policy in Muhammadiyah

No	Document	Short Description
1	AD/ART Muhammadiyah (2010)	The Statutes and Bylaws of Muhammadiyah
2	Muhammadiyah Waqf Guidelines (2010)	Special guidelines governing waqf management in Muhammadiyah.
3	47th Muhammadiyah Muktamar National Congress (2015)	Report from the 47th Muhammadiyah's Muktamar National Congress in Makassar.
4	Tanfidz of the 48th Muhammadiyah Muktamar National Congress Decision (2022)	The document outlines the implementation of decisions from the 48th Muktamar National Congress.
6	Council for Waqf Utilisation of Central Board of Muhammadiyah Report at the 48th Congress (2022)	Muhammadiyah waqf performance report from 2015 to 2021
7	Organisational Structure of Council for Waqf Utilisation of Muhammadiyah (2022)	The organisational structure of the Council for Waqf Utilisation of Muhammadiyah was approved at the 48th Congress.
8	2023 National Work Meeting Report	Report from the Council for Waqf Utilisation of Muhammadiyah's 2023 National Work Meeting (Rakernas) covering organisational policy discussions and waqf management evaluation.
9	muhammadiyah.or.id	The official website of Muhammadiyah provides information on policies, news, and organisational documents.
10	SIMAM Application (Muhammadiyah Waqf Management Information System)	Technology-based application for centrally managing and monitoring Muhammadiyah's waqf assets.

Table 5.2 Academic Literature Aligns with Waqf Management in Muhammadiyah

No.	Name	Title
1	Utami, et al. (2017)	Priority of Waqf Development and Its Barriers among the Muhammadiyah Awqaf AUM (Amal Usaha Muhammadiyah)
2	Medias & Pratiwi (2019)	Evaluation of Muhammadiyah Waqf Assets Utilisation in Magelang Regency.
3	Ulfiana & Yulianti (2019)	Optimalisasi Pengelolaan Wakaf Produktif di Majelis Wakaf dan Kehartabendaan Pimpinan Daerah Muhammadiyah Kota Yogyakarta
4	Nashir (2015)	Muhammadiyah: A Reform Movement
5	Mu'thi et.al (2015)	K.H. Ahmad Dahlan (1868-1923)

5.2 THE MUHAMMADIYAH WAQF INSTITUTIONAL NETWORK

The Muhammadiyah Waqf Institutional Network is a system designed to manage and develop waqf assets owned by Muhammadiyah organisations (The Statute and The Bylaws of Muhammadiyah, 2010). Muhammadiyah, one of Indonesia’s largest Islamic organisations, has many waqf assets for social, educational, and religious purposes. Moreover, an institutional network is an organisation that involves patterns of lateral or horizontal interactions and mutually beneficial flows of resources and information between autonomous but interdependent units.

As Indonesia’s most prominent social organisation, Muhammadiyah has a relatively solid and extensive structural network supporting the Islamic *da’wah* movement it promotes. Muhammadiyah’s structural network is spread out and tied into several levels with authority in their respective work areas. This network, which is widespread throughout Indonesia, has enormous potential to bring these people and the nation towards mainstream society through synergy and robust networks in various fields. Also, this structural network is a significant contribution of Muhammadiyah in accommodating the citizens of this nation to channel their diverse aspirations.

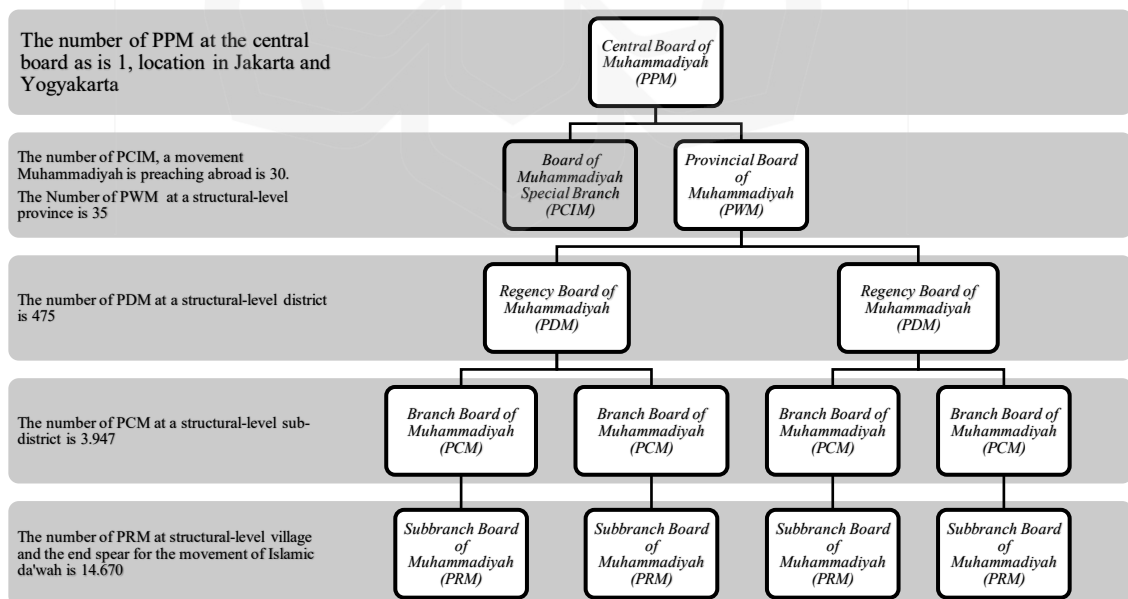


Figure 5.1 Organisational Structure of the Muhammadiyah

Muhammadiyah Waqf Institutional Network is hierarchical, with general direction and policy flowing from the centre to the lower levels, while reporting and accountability flow from the bottom to the top organisations (The Statute and The Bylaws of Muhammadiyah, 2010). Furthermore, each level coordinates with the above and below levels to ensure waqf management consistency. Although this structure is general, there may be variations in some areas depending on local needs and conditions. Each level has specific duties and responsibilities in managing waqf, adjusted to its scale and geographical scope. Finally, this structure allows Muhammadiyah to manage waqf in an organised and effective manner throughout Indonesia, considering local conditions and needs while maintaining alignment with central policies.

Furthermore, the structure (Figure 5.2) is constructed from a policy document, The Statute and Bylaws of Muhammadiyah (2010), Muhammadiyah Waqf Guidelines (2010), and the report of the 48th Muktamar National Congress (2022) to describe the authority/accountability structure that is proper, appropriate, consistent with the Waqf environment, and relevant for Technology adoption. The supervision system is carried out in stages, with each level supervising the level below it. In Muhammadiyah waqf (Figure 5.2), upper management comprises the Central Board of Muhammadiyah as a supervisor, which determines the waqf policy. Mid-level management includes Muhammadiyah Province/District/ Sub-District levels, such as *nazir*. *Nazir* provides directions to lower-level management (PRM or AUM). They regularly control the waqf property management and status and enforce some punishments for mismanagement of waqf property, as with *mutawalli* (Mohsin & Muneesa, 2020). The lower-level management is the Subbranch Board of Muhammadiyah (PRM), a structural-level village, and Muhammadiyah Social Enterprise (AUM), the institution that manages the assets in Muhammadiyah, for example, schools, universities, hospitals, mosques, and so on. *Mutawalli* is the trustee or custodian of the waqf and is responsible for managing the waqf assets by preserving, saving, and distributing income generated in compliance with the requirements of the founder to the stated beneficiaries (Mohsin & Muneesa, 2020). The Muhammadiyah Waqf Institutional Network enables organisations to manage waqf assets efficiently and effectively, supporting various Muhammadiyah social and educational programs throughout Indonesia.

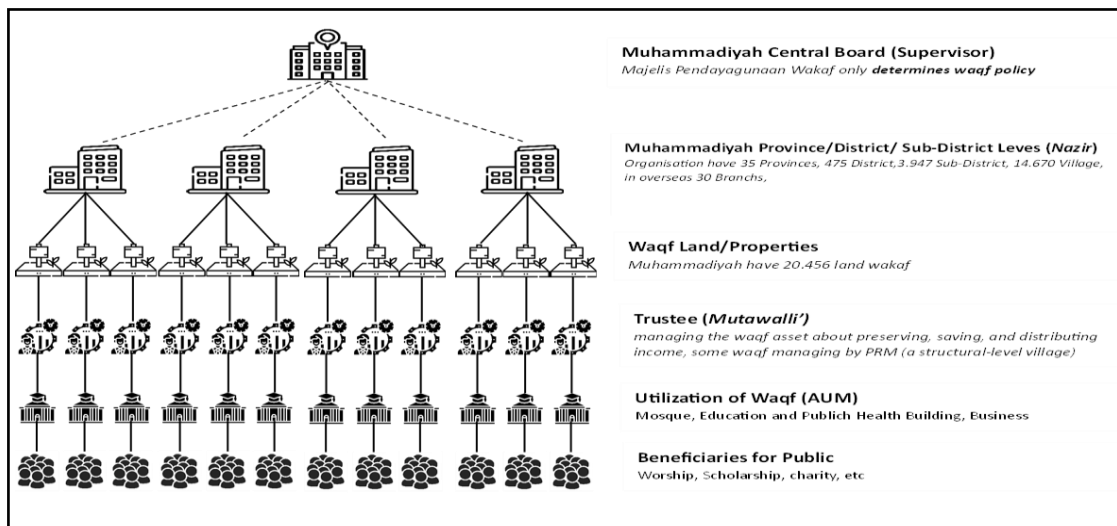


Figure 5.2 The Muhammadiyah Waqf Institutional Network

Once a waqf institution establishes its management levels, it must determine whether the bureaucracy is centralised, decentralised, or combined (hybrid). Understanding the structures of centralised and decentralised organisations provides a foundation for understanding the integrated waqf model's variations (Dalling, 2007).

At the 47th Congress of Muhammadiyah in Makassar, the Council of the Central Board 2010-2015 report highlighted the fundamental problem facing centralised and decentralised Muhammadiyah management. The solidarity of Muhammadiyah is better maintained and can create cross-subsidies with a centralised design. The centralised ownership and administration of the Central Board of Muhammadiyah have several advantages, including the legal guarantee of waqf assets' permanence. *Secondly*, the supervision can be coordinated by the organisation's policy to an equal standard. *Thirdly*, it is easy to control waqf assets. *Fourthly*, it is easy to determine waqf asset development strategies (Medias & Pratiwi, 2019). Centralisation, however, promotes the build-up of all problems in the Central Board Council, so Muhammadiyah's management progress will slow down because it has much to do with the issues and the work (Muhammadiyah, 2015).

On the other hand, the decentralisation pattern allows the pace of the Muhammadiyah movement to become more inclusive and pragmatic towards Islam. Still, it encourages inconsistency between branch/regional leaders, and even regional sectoral egos occur between the social business of Muhammadiyah and the

organisation. Therefore, more thorough research is necessary to identify centralised and decentralised systems to allow the Muhammadiyah to ascertain immediately which one, so that the problems will not become more complex or generalised (Muhammadiyah, 2015). In 2015, as reported by the 47th *Muktamar* National Congress in Makassar:

“Until now, the size of the organisation's assets has not been appropriately documented. The Central Board of Muhammadiyah, in this case, the Council of Endowments and Property, has made great efforts to develop a Muhammadiyah asset data system. One cause is that not all organisational assets have been appropriately recorded at all levels. However, the Council of Endowments and Property will continue to try to collect data on the organisation's assets.”

In managing the Waqf Institutional Network, Muhammadiyah implements a decentralised recording and reporting system without a centralised database. Every level of the organisation, from branches to the centre, carries out manual recordings and stores waqf archives locally. Reporting is carried out in stages, with information flowing from the bottom level to the top through a periodic reporting mechanism. Coordination between organisational levels is carried out through meetings, correspondence, or direct communication. While this approach allows for flexibility and accountability at the local level, it also presents challenges in data consolidation, standardisation of records, and comprehensive analysis of waqf across the organisation. This situation reflects the traditional approach to waqf information management, which may require developing more integrated systems to improve the overall efficiency of waqf management.

After the 2015 *Muktamar* National Congress, Muhammadiyah launched the Muhammadiyah Information System (SIMAM) (SuryaWarta, 2019), a system designed to support the more effective and accountable management of Muhammadiyah assets and wealth, including waqf land. SIMAM is a digital platform that facilitates recording and monitoring organisational assets, including mosques, schools, hospitals, waqf land, and other Muhammadiyah charitable efforts. This system allows for more structured, transparent, and integrated management at all levels of Muhammadiyah, from the centre to the branches.

However, asset data collection was not fully completed until the 48th *Muktamar* National Congress 2022. Therefore, at the 48th Congress, Muhammadiyah emphasised

the need to improve the system for managing waqf land and organisational assets using SIMAM. This step was taken to ensure that the system, pioneered several years ago, could be implemented comprehensively.

“Development Program: Improving the Management System for Waqf Land and Organisational Asset Databases using the Muhammadiyah Asset Management Information System (SIMAM).”

The improvement and development of SIMAM is a priority for the Muhammadiyah Waqf Utilisation Council in the next few years, especially to ensure that all waqf asset data and organisational wealth can be collected and managed correctly. This system is expected to support operational efficiency and increase transparency and accountability in asset governance at various levels. With wider and optimal implementation, SIMAM will become an important foundation for Muhammadiyah in advancing its social, economic, and religious roles and facing the challenges of the digital era with modern and innovative governance.

5.3 WAQF POLICIES IN MUHAMMADIYAH

Muhammadiyah, one of Indonesia’s most prominent Islamic organisations, plays a vital role in waqf management through the Council for Waqf Utilisation (*Majelis Pendayagunaan Wakaf*). Muhammadiyah waqf management is carried out professionally with modern management principles, transparency, and accountability. The focus is on the development of productive waqfs, such as property and other businesses, with the proceeds being used for social, educational, health, and other programs. This organisation has also begun to adopt digital technology in waqf management and reporting, as well as actively conducting outreach and education to the public about the importance of waqf. Muhammadiyah also collaborates with various parties to optimise the management and development of its waqf assets. Muhammadiyah waqf management consists of two main parts: administration and management. The Council for Waqf Utilisation (*Majelis Pendayagunaan Wakaf*) handles the administration, while various other councils in the Muhammadiyah organisation focus on managing waqf assets.

5.3.1 Administration and Management of Muhammadiyah Waqf

Since its establishment on November 18, 1912, by KH Ahmad Dahlan, as a da'wah organisation-based institution in Indonesia, Muhammadiyah has been trusted to manage the awqaf assets independently. (Mu'thi et al., 2015b; Nashir, 2015b; Utami et al., 2017). Accordingly, the Minister of Home Affairs issued Decree No. SK.14/DDA/1972 concerning the appointment of the Muhammadiyah Organisation as a legal entity that can own land with ownership rights. Based on the Decree, the waqf assets can be collected by the Muhammadiyah Board at all levels or the Muhammadiyah Institution in every region throughout Indonesia, with the ownership requirement of the SKPP (Certificate of the Central Board) Muhammadiyah as Waqf Nazir. According to the Muhammadiyah Regulation (ART) on Financial Management and Wealth Chapter 34 verse (1). It states, "*All finance and wealth of Muhammadiyah, including the finances and assets of the Assistant Principal, Enterprises, and the Central Board of Muhammadiyah, legally owns autonomous organisations at all levels.*" Moreover, it emphasises that all asset properties, both waqf and non-waqf, are the property of the Central Board of Muhammadiyah, the legal owner of all the organisation's assets (Medias & Pratiwi, 2019).

In managing waqf assets, Muhammadiyah follows shariah principles based on Islamic teachings. One important guideline is the hadith narrated by Ibn Umar radhiyallahu 'anhuma, in which the Prophet Muhammad SAW instructed Umar bin Khattab regarding his waqf land. The Prophet SAW ordered that the land be given to charity without changing its principal ownership. This hadith emphasises that waqf must be managed for social interests, such as helping the poor, relatives, and activities in the path of Allah, without any right to sell, donate, or inherit it.

Umar received a piece of land in Khaibar. He went to the Prophet (peace and blessings be upon him) and said: "O Messenger of Allah, I have acquired a piece of property that is more valuable than anything else. What do you command me to do with it?" The Prophet (peace and blessings be upon him) said: "If you wish, keep the property (the principal) and donate its benefit (the yield)." So, Umar donated the land because it could not be sold, given away, or inherited. He dedicated it to the poor, relatives, free slaves, for the cause of Allah, guests, and travellers in need. There is no harm if the one who manages it (the Nazir)

reasonably consumes part of its produce or feeds his friends, as long as he does not store it for himself." (Sahih al-Bukhari and Sahih Muslim)

This principle aligns with the management of waqf assets in Muhammadiyah (Muhammadiyah Waqf Guidelines, 2010), where waqf assets are used for the benefit of the community, including establishing schools, hospitals, orphanages, and other social activities. The national legal framework, namely, also supports the management of the Muhammadiyah waqf:

1. Government Regulation Number 28 of 1977 concerning the Waqf of Owned Land.
2. Law Number 41 of 2004 concerning Waqf.
3. Government Regulation Number 42 of 2006 is the implementing regulation of Law Number 41 of 2004.
4. Regulation of the Minister of Religious Affairs Number 4 of 2009 concerning the Administration of Cash Waqf Registration.
5. Regulation of the Indonesian Waqf Board Number 2 of 2010 concerning Procedures for Registration of Nazhir for Cash Waqf.
6. Decree of the Director General of Islamic Community Guidance Number Dj.III/420 of 2009 concerning Specifications of Cash Waqf Forms.

This solid regulatory structure strengthens the legal protection of waqf assets and creates avenues for Muhammadiyah to integrate modern financial instruments into waqf management. Through the proper implementation of these laws and regulations, Muhammadiyah can potentially optimise the use of waqf funds and assets to support various social, educational, and health initiatives, thus contributing to the welfare of society at large. Combining traditional land waqf and the innovative use of cash waqf positions Muhammadiyah to address contemporary societal needs more effectively and sustainably.

The Council for Waqf Utilisation administers Waqf Management in Muhammadiyah. This council is responsible for supervising and coordinating waqf management. In contrast, technical management is carried out by the Muhammadiyah Social Enterprise (AUM) at every level of the organisation, from branches to regions (Medias & Pratiwi, 2019b; Wahyu Puspitasari, 2017). This management involves cooperation with other councils in Muhammadiyah to ensure that the wider community can benefit from waqf assets.

In a structured manner, the management of Muhammadiyah waqf assets, especially land, is carried out at various levels of the organisation, from villages to provinces, with integrated coordination and supervision. Waqf land has great potential for developing educational facilities, health, and other social activities. For example, in the Council for Waqf Utilisation as *nazir* in Yogyakarta (Ulfiana & Yulianti, 2019) and Magelang (Medias & Pratiwi, 2019b), manage Muhammadiyah waqf through the waqf collection process and management of waqf assets until utilisation.

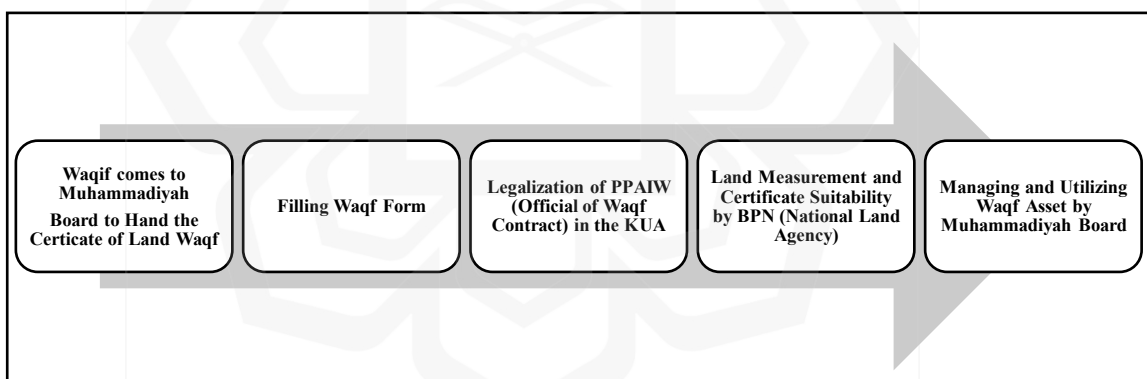


Table 5.3 The Process of Collecting Muhammadiyah Waqf Asset

Muhammadiyah waqf assets collected from the founder must be managed, utilised, developed, and maintained to impact the ummah positively (Medias & Pratiwi, 2019b). Government Regulation Number 42 of 2006, chapter 45, verse (1) states that the manager (*Mutawalli*) must manage and utilise waqf assets relevant to the designation indicated in the Waqf Deed. To achieve optimal waqf management, Muhammadiyah follows the provisions of applicable laws and continues to develop asset administration and management under shariah principles and modern

professionalism. By involving technology and competent human resources, Muhammadiyah is committed to maximising the potential of the waqf to support various social and educational programs, which ultimately contribute to the welfare of the wider community.

The Council for Waqf Utilisation is the Waqf Division, which manages the Waqf's assets and land (Ulfiana & Yulianti, 2019). Waqf land assets managed by Muhammadiyah are spread all over Indonesia. In 2024, the Council for Waqf Utilisation is conducting an inventory of all assets through the SIMAM Program. The following data on waqf land from Muhammadiyah was updated in 2023. Muhammadiyah has built extensive assets and social business, covering 20,465 Waqf Asset locations with a total land area of 214,742,677 m². These charities include 172 higher education institutions (83 universities, 53 colleges, 36 others), 122 hospitals (20 under construction), 231 clinics, 5,345 schools/madrasahs, 1,012 Muhammadiyah Social Enterprise Charities (AUMSos), and 440 Islamic Boarding Schools Muhammadiyah. This organisation is also active in international humanitarian missions in various countries, including Palestine, the Philippines, Myanmar (Rohingya), Pakistan, Bangladesh (Cox Bazar), Morocco, Turkey, Nepal, Sudan, Libya, Jordan, and Lebanon (Muhammadiyah.or.id).

5.3.2 The Muhammadiyah Waqf Framework

The management of waqf in the Muhammadiyah organisation, as regulated in the Muhammadiyah Waqf Guidelines (2020), includes three main stages: input, the nazir management process, and output in the form of benefits for the community, especially in improving welfare and socio-economic development (Figure 5.4). This process illustrates the basic flow of waqf management, focusing on distributing waqf proceeds to needy groups. However, further analysis of other policies through in-depth observation found that the Muhammadiyah waqf management structure strictly separates administration and management. This structure appears designed to increase efficiency and transparency in waqf management. Under the Council for Waqf Utilisation, the administration section is responsible for administrative aspects, such as recording, documentation, and reporting. Good management in this administrative aspect is needed to ensure accountability and facilitate a more transparent monitoring

and reporting process to the public and related parties. In tandem, the management section is coordinated by the Muhammadiyah Social Enterprise (AUM), which collaborates with various other councils. This section's main task is to focus on the utilisation and development of waqf assets so that they can optimally contribute to the community's welfare and the development of a broader social economy.

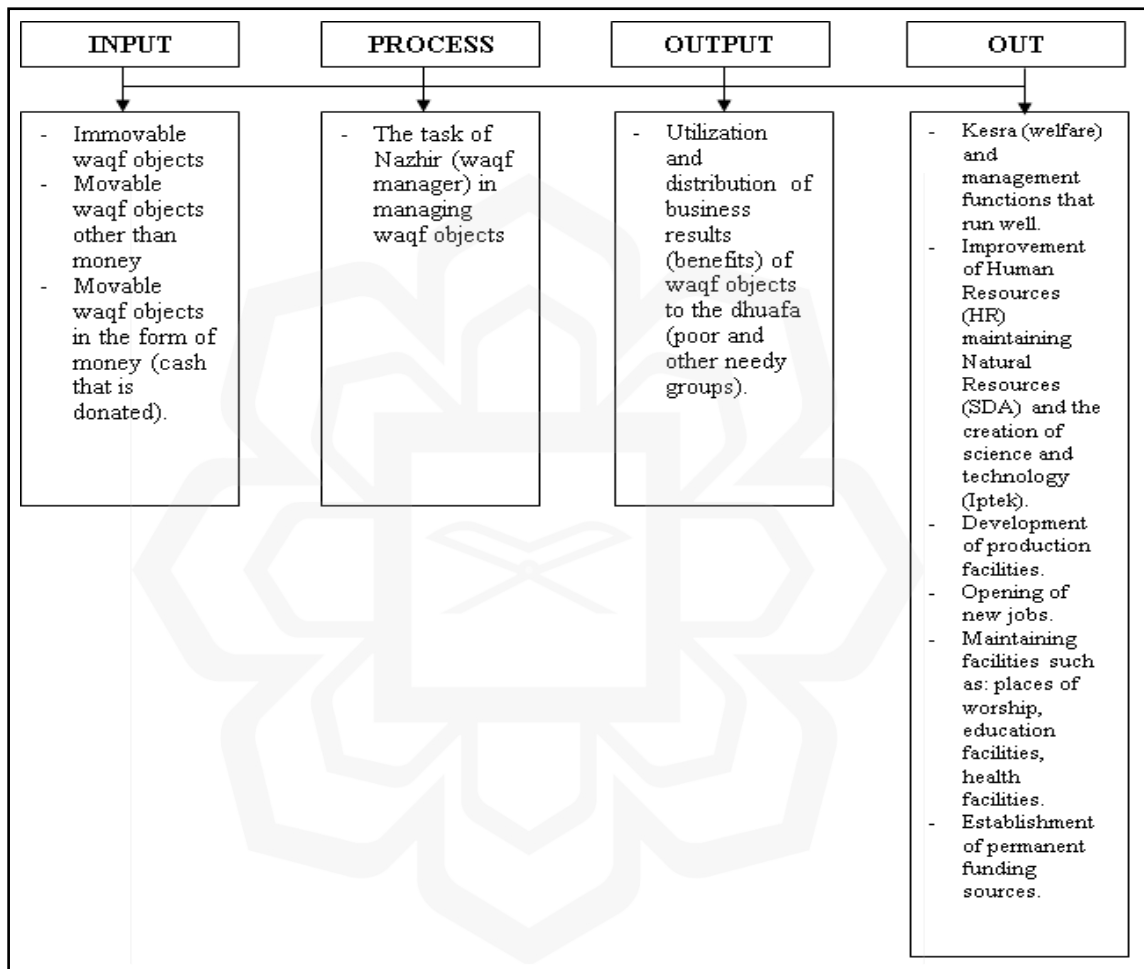


Figure 5.3 *The Muhammadiyah Waqf Management (2020)*

This separation is not only to avoid overlapping functions but also to ensure that every aspect of Waqf management can run effectively regarding administration and asset utilisation. Ultimately, this management model aims to increase Waqf productivity, expand its social impact, and ensure management under shariah principles and good governance.

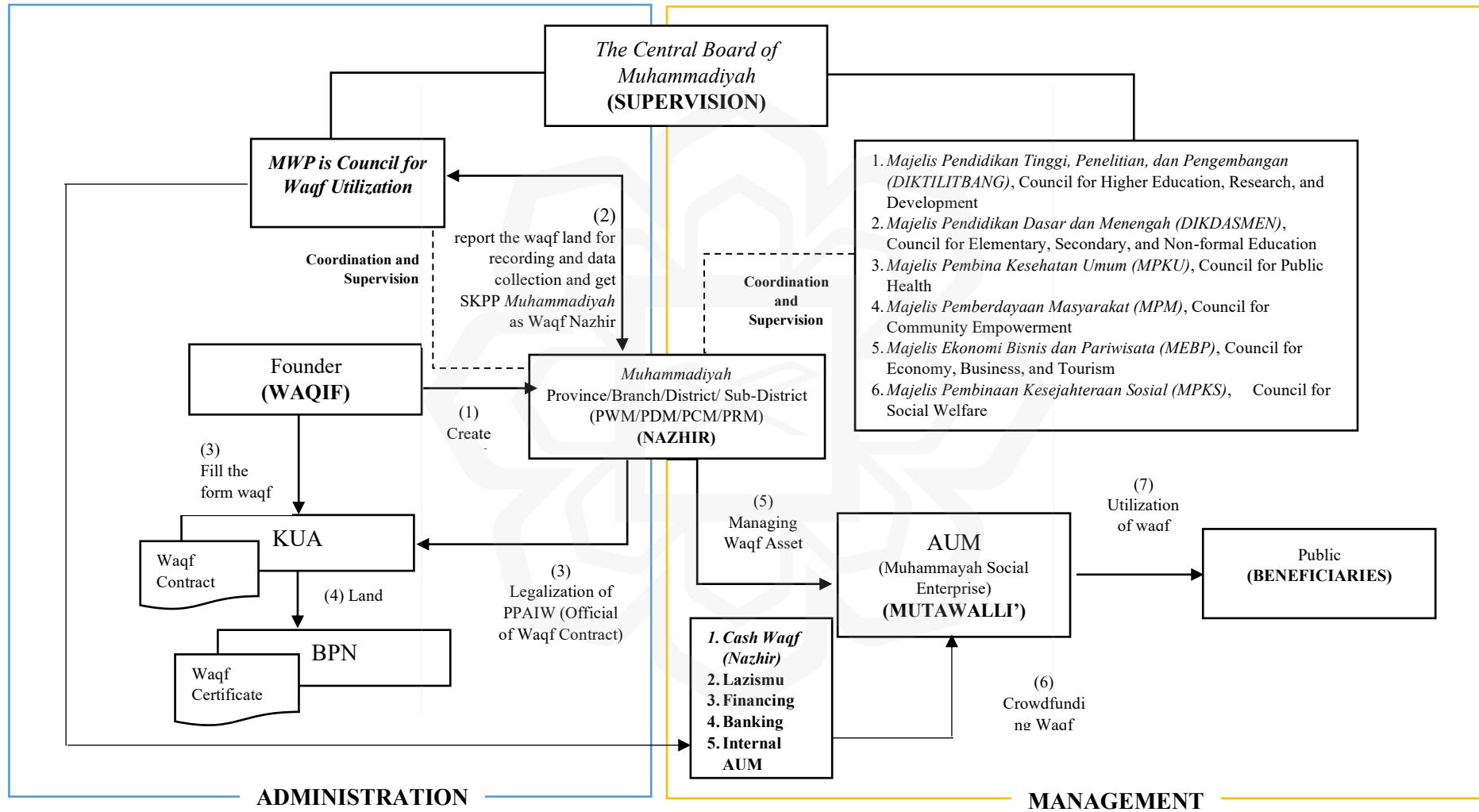


Figure 5.4 The Muhammadiyah Waqf Framework

This separation of functions can help ensure more effective and accountable management of waqf assets within the Muhammadiyah organisation. The waqf process in Muhammadiyah is as follows:

i. Creat Waqf

The *Wakif* (founder of waqf) visits the Muhammadiyah office at the PWM (Provincial), PDM (Regency), or PCM (District) management level closest to the land to be donated. The *Wakif* brings land ownership documents (such as a land certificate), personal identity (ID card and Family Card), and a map or land plan to convey the intention to donate the land to the authorised administrator. They provide detailed information about the area, location, and condition of the land to be donated, state the purpose of the waqf (if there are special plans), as well as start the waqf administration process and get an explanation of the next steps in the Muhammadiyah waqf procedure.

ii. PWM/PDM/PCM Report the Waqf Land for Recording the Data Collection and Get SKPP Muhammadiyah as Waqf Nazhir

After the wakif conveys his intentions, the PWM/PDM/PCM will report the waqf land to the Council for Waqf Utilisation of the *Central Board of Muhammadiyah*. This report includes complete *wakif* data, location and land area, proof of land ownership, and the waqf's purpose. At the same time, PWM/PDM/PCM prepares the application for the Muhammadiyah Management Appointment Decree (SKPP) as Nazhir Waqf. This file includes the application form, waqf land data, and other supporting documents. The following is the SKPP issuance process:

- a. The SKPP application is sent to the *Central Board of Muhammadiyah*.
- b. The Council for Waqf Utilisation in the Central Board will check the completeness and validity of the documents.
- c. The *Central Board of Muhammadiyah* will issue an SKPP if all requirements are met.

- d. This SKPP confirms that *Muhammadiyah* was appointed as Nazir (manager) of the waqf for the land.
- e. SKPP will be returned to the PWM/PDM/PCM, which submitted it.
- f. PWM/PDM/PCM can use this SKPP for further processing at the Religious Affairs Office (KUA).

With this SKPP, PWM/PDM/PCM can continue making the Waqf Pledge Deed (*Akta Ikrar Wakaf*) at KUA. This process is important to ensure that waqf land is appropriately recorded in the Muhammadiyah system and that this organisation is officially appointed as waqf manager by applicable regulations.

iii. **Legalisation of PPAIW (Official of Waqf Contract)**

After receiving the SKPP (Certificate of Appointment of Manager) from the Central Board of Muhammadiyah, PWM/PDM/PCM representatives visited the local Religious Affairs Office (KUA) to start the process of making the Waqf Pledge Deed (*Akta Ikrar Wakaf*). KUA is a government institution with authority in religious matters, including waqf and Waqf Pledge Deed (*Akta Ikrar Wakaf*), an official document stating the handover of waqf assets. At the KUA, wakif and PWM/PDM/PCM meet with the PPAIW (*Pejabat Pembuat Akta Ikrar Wakaf*), who is usually the head of the KUA or an appointed official. The following is the process for making a waqf pledge deed in KUA:

- a. PPAIW will verify the required documents and ensure that all legal requirements for waqf have been met.
- b. Meanwhile, the *Wakif* (founder of the waqf) fills out the waqf land handover form, which contains details about the land, the purpose of the waqf, and Muhammadiyah's appointment as Nazhir (manager of the waqf).
- c. After completing the form, PPAIW prepares the Waqf Pledge Deed, which the Wakif, witnesses, and Muhammadiyah representatives sign.

- d. PPAIW then issues an official Waqf Pledge Deed, provides a copy to the *Wakif* and Muhammadiyah, and records it in the KUA waqf register.

This process is crucial in formalising waqf and ensuring that land transfer is carried out legally according to law and religion before continuing with registration with the National Land Agency (BPN).

iv. Land Measurement at BPN

The process of registering waqf land with the National Land Agency (BPN) on behalf of the Society Muhammadiyah is explained in more detail:

- a. Document Preparation:
 - Waqf Pledge Deed (AIW) made at the Office of Religious Affairs (KUA),
 - Original land certificate
 - Nazir's (in this case, Muhammadiyah) endorsement letter from the KUA
 - Power of attorney from Nazir if represented
 - Nazir's identity (KTP, deed of establishment of Muhammadiyah)
 - Waqf land registration application letter
- b. Nazir or his representative applies for waqf land registration to the local BPN office, bringing all the required documents.
- c. BPN officers will check the completeness and validity of the documents submitted. BPN will re-measure and map the waqf land and create a unique land book if necessary.
- d. BPN issued a waqf land certificate in the name of the Society Muhammadiyah as Nazir.
- e. Waqf land data is entered into the BPN administration system.

- f. The waqf land certificate is handed over to the Muhammadiyah Association as proof of ownership.
- g. Muhammadiyah reports the acquisition of waqf land certificates to the Ministry of Religion, which will be recorded in the waqf land register.

This process is important to provide legal certainty regarding the status of waqf land and protect waqf assets from potential disputes in the future. This registration also makes managing and supervising waqf land easier for Muhammadiyah as Nazhir.

v. **Managing Waqf Asset**

Under the PWM/PDM/PCM, the *Muhammadiyah Social Enterprise (AUM)* manages waqf land by coordinating directly with the relevant council according to the waqf designation. *Muhammadiyah Social Enterprise (AUM)* is an institution founded by Muhammadiyah to carry out various activities according to its fields, such as education, health, and socioeconomics.

- a. This process begins when the PWM/PDM/PCM appoints the appropriate AUM to manage certain waqf land.
- b. AUM then coordinates with the relevant Muhammadiyah councils, such as *Majelis Pendidikan Tinggi, Penelitian, dan Pengembangan (DIKTILITBANG)*, for higher education; *Majelis Pendidikan Dasar dan Menengah (DIKDASMEN)*, for Primary and middle education; *Majelis Pembina Kesehatan Umum (MPKU)*, for health; *Majelis Pemberdayaan Masyarakat (MPM)*, for community development; *Majelis Ekonomi Bisnis dan Pariwisata (MEBP)*, for business; *Majelis Pembinaan Kesejahteraan Sosial (MPKS)*, for social

- c. These councils act as supervisors, providing strategic direction, ensuring management is guided by waqf objectives and Muhammadiyah principles, and conducting periodic evaluations.
- d. AUM regularly reports progress and management results to PWM/PDM/PCM and related councils. The council can also provide input for developing or optimising the use of waqf land.

This entire process is carried out transparently. Muhammadiyah's internal structure and the wider community are accountable for ensuring that waqf land is managed professionally, providing maximum benefits for the community while maintaining Muhammadiyah's values and principles.

vi. **Crowdfunding Waqf**

Initial funding for the development of Muhammadiyah's social enterprise through community cooperation is a manifestation of the fundamental values in this organisation, reflecting the spirit of togetherness and mutual assistance, which is in line with the Islamic principle of *ta'awun*. This cooperation is manifested in various forms, ranging from material donations (money, building materials, or land) to energy donations (community service, professional services) to contributions of ideas from Muhammadiyah experts and figures.

The fund collection mechanism is managed by a special committee involving the entire Muhammadiyah network from the sub-district to the central level. Various creative methods are utilised, such as organising charity events and bazaars and issuing productive waqf certificates. This process not only helps in terms of funding but also strengthens social ties and a sense of belonging among Muhammadiyah members.

In facing funding constraints, *Muhammadiyah Social Enterprise* (AUM) has several financing options that comply with shariah principles. First, AUM can apply for a loan from shariah banking, which offers a profit-

sharing or buying and selling-based financing scheme according to project needs. The second alternative is waqf crowdfunding, where AUM can raise funds from the broader community through a cash waqf. This process is managed by the Muhammadiyah Waqf Utilisation Council, which is tasked with coordinating and supervising the collection and management of cash waqf for various AUM projects. The third option is through Lazismu (*Amil Zakat Infaq and Shadaqah Muhammadiyah Institute*), which can allocate zakat, infaq, and alms funds to support AUM projects that comply with sharia provisions. These three options provide flexibility for AUM in choosing the funding source that best suits the needs and characteristics of its project while maintaining compliance with Islamic economic principles.

Transparency and accountability are maintained through regular reporting, while religious motivation continues to be fostered with the understanding that this contribution is part of the Jariyah charity. Many Muhammadiyah Social enterprises, such as schools, hospitals, and universities, were built through this cooperation method, creating a strong foundation for future charity development and sustainability.

vii. **Utilisation of Waqf Asset**

The results of Muhammadiyah's waqf management are used to benefit the welfare of the people through various comprehensive programs and services. The focus is on four strategic areas: education, health, socioeconomics, and da'wah. In the education sector, waqf funds are used to establish and manage educational institutions from elementary to tertiary level, provide scholarships, and improve the quality of educational facilities. In the health sector, waqf proceeds are allocated to construct and operate hospitals, clinics, and public health programs. The socio-economic aspect includes economic empowerment of the people through cooperatives, micro-enterprises, and skills training. Meanwhile, in da'wah, funds are used to build mosques and develop da'wah media and religious programs. This aims to holistically improve Muslims' quality of life, from fulfilling basic needs

to spiritual development, thereby creating a materially and spiritually prosperous society under Islamic teachings.

In conclusion, the waqf management process in Muhammadiyah includes a series of structured and coordinated procedures, from the creation of the waqf and legalisation to its utilisation for the community's welfare. These steps involve various parties, from the waqif level, Muhammadiyah administrators at various levels, and related government agencies such as the KUA and BPN, which ensure that waqf assets are managed legally and by religious provisions and applicable laws. In addition, innovation in fundraising through waqf crowdfunding methods and community involvement reflects the spirit of cooperation in Islam, strengthening social participation. With transparent and accountable management, Muhammadiyah has succeeded in maximising the utilisation of waqf assets in education, health, socioeconomics, and da'wah. This is a significant contribution to improving the welfare of the people, both materially and spiritually, in line with Islamic principles.

5.4 IN-DEPTH INTERNAL ANALYSIS OF MUHAMMADIYAH WAKAF MANAGEMENT

Muhammadiyah, one of Indonesia's largest Islamic organisations, has been important in managing waqf assets for many years (Nashir, 2015). Waqf assets managed by Muhammadiyah include various educational institutions, such as schools and universities, health facilities, hospitals, and other social services (Pimpinan Pusat Muhammadiyah, 2015b). Muhammadiyah has a well-structured waqf management system involving various institutions under its auspices. The waqf management policy and framework include administrative and management mechanisms that reflect Muhammadiyah's efforts to maximise the potential of waqf to support its various socio-business programs. Nevertheless, as with any other system, these policies and frameworks in the management of Muhammadiyah waqf have been designed to support its effectiveness; some strengths and weaknesses require further attention. It is important to conduct a comprehensive evaluation to identify weaknesses that can hinder

achieving strategic goals, especially related to adaptation to the challenges of the digital era.

5.4.1 Strengths in the Management of Muhammadiyah Waqf

Muhammadiyah Waqf's management has several aspects that strengthen its position as one of the largest waqf managers in Indonesia. With a long history of managing social and religious assets, Muhammadiyah has built a solid and structured system for performing its waqf functions. Based on the Guidance of Muhammadiyah Waqf (2010), this organisation relies on shariah principles and professional management to ensure sustainability and optimal utilisation of the Waqf Assets. Below are some main strengths that make Muhammadiyah waqf management effective and competitive in the modern socio-economic context.

5.4.1.1 Centralised and Secure Ownership:

Centralised ownership of waqf assets under the Muhammadiyah Association guarantees security and stronger legal protection. By registering all assets in the name of Muhammadiyah as a legal entity, the risk of ownership conflicts and misuse by external parties or individuals can be minimised. This centralised ownership ensures that waqf assets continue to be managed following their original purpose, thus providing a sense of security for waqif (donors) regarding the sustainability of the use of these assets.

Moreover, this centralised ownership system also strengthens the ***Persyarikatan Muhammadiyah***. More organised asset management allows for optimal use to support strategic programs, such as education, health, and economic empowerment, which ultimately significantly impact society.

5.4.1.2 Strict Supervision System:

One of the strengths of managing Muhammadiyah Waqf is the strict and well-structured supervision system due to the clear hierarchical structure. The Council for Waqf Utilisation (MPW) acts as a supervisory body under the supervision of the Central Board of Muhammadiyah. This supervision system has several characteristics that can strengthen waqf management:

- i. **Multilevel Supervision:** Waqf management is supervised at the central level, the regional, branch, and sub-branch levels. Each level of the Muhammadiyah organisation is responsible for reporting its waqf activities, which allows for more structured and comprehensive supervision.
- ii. **Coordination Between Councils and Institutions:** Each council in Muhammadiyah, such as Education, Health, Community Empowerment, Business Economics, and Social Welfare Councils, has a specific role in managing waqf assets. Supervision is carried out regarding the physical management of assets and their use for social programs under shariah objectives and Muhammadiyah values.
- iii. **Internal Transparency:** Every Waqf report is supervised through an internal mechanism that ensures that Waqf funds and assets management are carried out under the regulations and objectives set. This management is also regularly reported to the Council for Waqf Utilisation, allowing effective control over the use of Waqf and possible deviations to be immediately detected.
- iv. **Strengthening Accountability:** This supervision system also strengthens organisational accountability. A strict supervision mechanism ensures that waqf managers (nazhir) are fully responsible for managing the waqf entrusted to them. This helps maintain public trust and strengthen the legitimacy of Muhammadiyah's Waqf management.

This strong supervision system is an important foundation for Muhammadiyah in ensuring that waqf assets are managed properly, transparently, and accountably so that they can provide optimal benefits to the community under waqf principles.

5.4.1.3 Extensive Organisational Network

Muhammadiyah has an extensive organisational network, with branches spread across various regions in Indonesia and abroad. In Indonesia, the Muhammadiyah organisational structure covers the central level to branches in the regions, consisting of 35 Provincial Board of Muhammadiyah (PWM) at the provincial level, 475 Regency Board of Muhammadiyah (PDM) at the district/city level, 3,947 Branch Board of Muhammadiyah (PCM) at the sub-district level, and 14,670 Subbranch Board of Muhammadiyah (PRM) at the village/sub-district level (Muhammadiyah.or.id, n.d). At the same time, in several countries, Muhammadiyah has established the Board of Muhammadiyah Special Branch (PCIM) in Cairo, Iran, Sudan, the Netherlands, Germany, England, Libya, Malaysia, France, the United States, Japan, Pakistan, Australia, Russia, Taiwan, Tunisia, Turkey, South Korea, China, Saudi Arabia, India, Morocco, Jordan, Yemen, Spain, Hungary, Thailand, Kuwait, and New Zealand (Muhammadiyah.or.id, n.d). This network includes organisational branches and social enterprises as educational institutions, health facilities, and social service centres. With geographically dispersed branches, Muhammadiyah can manage waqf assets efficiently, adjusting the management to the local context of each region.

In addition, this extensive network also allows Muhammadiyah to reach various levels of society and maximise the potential in collecting and utilising waqf. Waqf managed through this network has a significant social impact in various sectors, including education, health, and economic empowerment. Decentralised but well-coordinated management allows for the distribution of waqf benefits evenly to communities throughout the country.

Furthermore, the extensive branch network also supports local community empowerment. Muhammadiyah utilises waqf assets to provide social and economic services based on local needs, such as education, health services, and economic

development, so that the role of waqf can be felt more directly by communities in various regions.

5.4.1.4 Diverse Councils for Special Sector Management

Muhammadiyah has various councils that manage special sectors in the Waqf, such as education, health, community empowerment, economy, business, tourism, and social welfare. Some of these councils include the Council for Religious Opinion and *Tajdid*; Council for Religious Preaching; Council for Higher Education, Research, and Development; Council for Elementary, Secondary, and Non-formal Education; Council for Cadre and Human Resources; Council for Public Health; Council for Social Welfare; Council for Economy, Business, and Tourism; Council for Waqf Utilisation; Council for Community Empowerment; Council for Law and Human Rights; Council for Environmental Preservation; and Council for Publication and Information (Muhammadiyah.or.id). With these councils, each sector is managed with more focus and direction. This segmented management ensures that waqf assets can be used optimally for specific needs according to the field of the related councils. The diversity of these councils also allows for the development of broader and more varied waqf, from simply managing land or physical buildings to social investments that support other strategic sectors.

5.4.1.5 Financial Sustainability through Muhammadiyah Social Enterprise

Muhammadiyah Social Enterprise (AUM) is one of the important elements supporting Muhammadiyah's financial sustainability, especially in managing waqf assets and social activities. With the number of charities spread across various sectors, AUM is the economic backbone of Muhammadiyah. In addition to providing education, health, and social services, AUM supports Muhammadiyah's vision to realise social and economic welfare based on sharia.

- i. Diversification of Income Sources: AUM Muhammadiyah has a wide network and operates in various sectors, from education and health to

business. The following is the number of Muhammadiyah Social Enterprises in several sectors (Muhammadiyah.or.id):

- a. Muhammadiyah-‘Aisyiyah Higher Education (PTMA): 172 (consisting of 83 Universities, 53 Colleges, and 36 other forms)
- b. Hospitals (RS): 122 (plus 20 Hospitals under construction)
- c. Clinics: 231
- d. Schools/Madrasahs: 5,345
- e. Muhammadiyah Islamic Boarding Schools (PesantrenMu): 440

This diversification creates various sustainable sources of income. PTMA, hospitals, clinics, schools, and Islamic boarding schools managed by Muhammadiyah generate independent income from their operations, which can then be used to fund social activities, education programs, and the development of waqf assets.

- ii. Productive Utilisation of Waqf Assets: AUM has a significant role in the productive utilisation of Waqf assets. These waqf assets are maintained and optimised to generate greater economic benefits. For example, waqf funds are used to build universities, hospitals, and schools that can continue to provide a stable income for Muhammadiyah. With this model, waqf assets managed productively provide social and economic benefits.
- iii. Professional Management AUM Muhammadiyah is managed with a professional management approach. This structured management system allows AUM to remain competitive in sectors such as education and health, which ultimately contributes to Muhammadiyah's financial sustainability. This professional management also ensures transparency and accountability, which are important for maintaining public trust and improving the organisation's reputation.
- iv. Integration with Productive Waqf Muhammadiyah manages passive waqf and develops a productive waqf model. For example, cash and other assets

are managed and invested in various productive businesses, such as universities, schools, hospitals, and so on. This approach increases Waqf's economic contribution and creates long-term financial sustainability for Muhammadiyah.

- v. **Crowdfunding and Innovative Funding** Muhammadiyah has also begun utilising crowdfunding platforms to raise funds from the community to support waqf programs and charitable activities. With this funding innovation, Muhammadiyah can reach a wider range of donors, including the younger generation, who are increasingly familiar with digital technology, to contribute to philanthropic activities.
- vi. **Revenue Sharing for Social Purposes** Most of the revenue from AUM is allocated for social and philanthropic programs. This aligns with Muhammadiyah's vision of community empowerment through education, health, and social welfare. This model prioritises economic benefits and encourages the creation of broader social welfare in the community.
- vii. **Integrated Financial Management.** The financial management of AUM and waqf assets is integrated with shariah principles. This ensures that fund management remains transparent, accountable, and sustainable by maximising the value of waqf assets. With this financial integration, Muhammadiyah can manage its resources more efficiently and maintain financial stability in the long term.

AUM Muhammadiyah is crucial in maintaining the organisation's financial sustainability, including managing waqf assets. With a wide range of charitable efforts, including 172 Universities, 122 Hospitals, 231 Clinics, 5,345 Schools/Madrasahs, and 440 Islamic Boarding Schools, Muhammadiyah has a solid economic foundation to support its social and religious missions. A professional and innovative approach to waqf management and diversification of income sources ensures that Muhammadiyah can continue to grow and positively impact society.

5.4.2 Weaknesses in the Management of Muhammadiyah Waqf

Although Muhammadiyah has demonstrated various strengths in its waqf management, several challenges and weaknesses need to be addressed to ensure the sustainability and effectiveness of the system in the future. These weaknesses include administrative aspects, technology, and suboptimal public participation. Identifying these weaknesses is important so that Muhammadiyah can maximise its waqf potential and adapt to the times. The following are some weaknesses in Muhammadiyah's waqf management that must be considered.

5.4.2.1 Big Data at the Central Level Has Not Been Completed

The collection and management of Big Data at the central level of Muhammadiyah has not been completed. Based on data from the Muhammadiyah Asset Management Information System (SIMAM) in 2024, only 43.06% of the data has been collected, covering several categories of waqf and non-waqf assets as follows:

1. Land: 26,450 locations with a total area of 217,661,313 M².
2. Buildings: 14,088 units with a total area of 14,088 M².
3. Goods: worth IDR 2 billion.
4. Vehicles: 2,056 units.

The incomplete collection of this data is a significant weakness because, without comprehensively integrated data, Muhammadiyah finds it challenging to analyse waqf assets. Fragmented data management hinders the organisation from maximising the potential of waqf assets, creating strategic and operational planning challenges.

These data limitations also reduce Muhammadiyah's ability to supervise and make decisions based on accurate data, especially in monitoring and optimising the use of waqf assets spread across all regions.

5.4.2.2 Complicated Administrative Process

The administrative process of waqf management in Muhammadiyah is complicated because it involves many bureaucratic stages requiring time and complete documents. First, the waqif must fill out a waqf form that often requires legal clarity and the collection of various requirements. After that, the process must go through the Religious Affairs Office (KUA) to obtain legitimacy for the waqf agreement. Although the involvement of the KUA is important for legality, it adds layers of bureaucracy that prolong the completion time. In addition, processing waqf certificates through the National Land Agency (BPN) is a critical stage, but often takes a long time due to the various additional document requirements. Legalisation by the Notary Deed Official Pledge of Waqf (PPAIW) appointed by the KUA is also an additional stage. With these many administrative stages, the waqf management process becomes slow and less efficient, which can ultimately reduce the community's motivation to make productive waqf. As a solution, Muhammadiyah can consider digitising the administrative process to facilitate online document processing, reduce bureaucracy layers, and accelerate waqf implementation.

5.4.2.3 Limited Application of Information Technology

One of the significant weaknesses in the management of Muhammadiyah Waqf is the limited application of information technology and the management system, which is still decentralised. No centralised technology is used to manage the Waqf comprehensively, so each region and Muhammadiyah Social Enterprise (AUM) has its own management system. This causes a lack of standardisation and data integration between regions, which makes it challenging to track assets, financial reporting, and strategic decision-making at the central level. Decentralised management also limits the ability of central leaders to monitor all waqf assets in real-time and effectively supervise them. In addition, this creates an imbalance in performance between regions, where regions with better human resources and technology will be more advanced in waqf management compared to regions with more limited resources.

The absence of a centralised system also limits joint innovation, such as using blockchain technology for transparency of waqf transactions or digital applications for

effective asset management. Different regions have varying levels of technological adoption, which causes Muhammadiyah to lag in terms of waqf management innovation nationally. To overcome these challenges, Muhammadiyah must build a centralised waqf management system that is integrated and accessible to all regions and AUM. An integrated digital platform can facilitate the reporting and monitoring process in real-time. In addition, intensive technology training for waqf managers in various regions is needed to ensure that all parties can utilise technology effectively. With a strong centralised system, Muhammadiyah can increase transparency, accountability, and efficiency in waqf management and optimise the use of assets to support the organisation's overall social and economic goals.

5.4.2.4 Complex Council Coordination

Complex Council coordination is one of the weaknesses of managing the Muhammadiyah waqf. The involvement of various assemblies with different duties and authorities causes this. Within the framework of Muhammadiyah waqf management, there are many councils involved, such as:

1. DIKTILITBANG is The Council for Higher Education, Research, and Development
2. DIKDASMEN is the Council for Elementary, Secondary, and Non-formal Education
3. MPKU is the Council for Public Health
4. MPM is the Council for Community Empowerment
5. MEBP is the Council for Economy, Business, and Tourism
6. MPKS is the Council for Social Welfare

This complexity occurs because each council has its own programs, priorities, and approaches to managing waqf assets. This often slows decision-making, requires intensive coordination between councils, and sometimes causes overlapping tasks and functions. In addition, although there is a council for waqf utilisation (MPW) responsible for supervision and coordination, the large number of parties involved makes communication and decision-making less effective.

Potential solutions to overcome this weakness are clarifying each assembly's role in waqf management, creating a more efficient coordination mechanism, and utilising technology to support cross-assembly communication. In addition, integrating technology-based information management systems can help speed up workflows and increase transparency between boards.

5.5 EVALUATION OF MUHAMMADIYAH'S TECHNOLOGICAL READINESS FOR WAQF MANAGEMENT

Waqf has long been an important instrument in Islamic social and economic development, with great potential to support education, health, and community empowerment. Muhammadiyah, as one of the most prominent Islamic organisations in Indonesia, plays a very significant role in the management of waqf assets. Through social enterprise spread across various fields, Muhammadiyah has successfully managed significant waqf assets for the benefit of the community. However, along with the development of the digital era, the need for technology-based waqf management is becoming increasingly urgent to improve efficiency, transparency, and accountability in managing these assets.

Evaluation of Muhammadiyah's readiness to adopt technology for Waqf management can be analysed from several relevant theoretical perspectives. First, the shariah governance approach by Al-Ghazali (1058 – 1111) highlights the importance of the conformity of waqf management with shariah principles. Second, the theory of non-profit organisations by Salamon and Anheier (1992) emphasises the role of Muhammadiyah as a non-profit organisation in managing social assets for the public interest. Third, stakeholder theory by Freeman (1984) suggests the importance of understanding the needs and roles of key stakeholders in waqf management, including the community, government, and internal parties of Muhammadiyah. Finally, the concept of socio-business integration proposed by Yunus (2023) offers an innovative approach to integrating social and business aspects in waqf management to make it more sustainable and have a broad impact.

This evaluation aims to assess the existing Muhammadiyah waqf framework, policies, and operations of Muhammadiyah waqf management. This assessment focuses on evaluating the adequacy and suitability of these elements as the main prerequisites for legitimising the implementation of a technology-based waqf management system integrated with social and business aspects (RO 1).

i. Shariah Governance Concept (Al-Ghazali, 1058 – 1111)

Al-Ghazali (1058 – 1111) put forward the concept of Shariah Governance as a governance mechanism that ensures that all decisions and actions taken by an organisation are under shariah principles. In the context of technology-based waqf management in Muhammadiyah, sharia governance must be the main foundation in every aspect. Technology such as SIMAM and WaqfMu must comply with shariah management principles of waqf trusts and assets, including transparency, fairness, and accountability. Muhammadiyah can fully accept technology by aligning internal policies with strict shariah governance, ensuring that integrated data is under shariah regulations, and optimising technology to strengthen the values of justice and equality in the distribution of waqf benefits.

ii. Theory of Non-Profit Organisations (Salamon & Anheier, 1992)

The theory of Non-Profit Organisations shows that non-profit organisations, such as Muhammadiyah, are important in providing social services that the private sector or government cannot always provide. In this context, Muhammadiyah, as a non-profit organisation, must balance its social mission and sustainable financial management. Technology adoption can help Muhammadiyah manage waqf assets more efficiently and transparently, supporting its social mission. However, the limited application of technology and challenges in data collection indicate that Muhammadiyah needs to strengthen its capacity as a non-profit organisation by focusing on professionalising asset management and improving technology infrastructure.

iii. Stakeholder Theory (Freeman, 1984)

Based on stakeholder theory (Freeman, 1984), organisations must identify and involve key stakeholders who influence the organisation's activities. In managing Muhammadiyah waqf, stakeholders include donors (waqif), waqf managers (nazhir), beneficiary communities, the government, and Islamic financial institutions. Adoption of technology in Muhammadiyah requires better coordination and communication with stakeholders. By increasing transparency and efficiency in waqf management, technology can help build stronger relationships between Muhammadiyah and stakeholders. Stakeholder involvement in the use of technology, such as through a dashboard-based reporting system in SIMAM, can increase trust and participation.

iv. Socio-Business Integration (Yunus, 2023)

According to Yunus (2023), socio-business integration is a model that combines business profits with social missions to create shared value. In managing waqf, Muhammadiyah has adopted this principle through the Muhammadiyah Social Enterprise (AUM), which is a source of income and provides social benefits in the education, health, and economic empowerment sectors. With the adoption of technology, socio-business integration can be further strengthened. Technology can help improve the operational efficiency of AUM and productive waqf, which will ultimately expand the social impact of Muhammadiyah waqf assets. Digital crowdfunding and technology-based waqf platforms, for example, can be practical tools to increase community participation and create more excellent value both economically and socially.

Based on the analysis conducted using various relevant theories, such as Shariah Governance (Choudhury & Hoque, 2006), Theory of Non-Profit Organisations (Salamon & Anheier, 1992), Stakeholder Theory (Freeman, 1984), and Socio-Business Integration (Yunus, 2023), it can be concluded that Muhammadiyah has great potential to adopt technology in waqf management. However, the process of legitimising

technology and Muhammadiyah's readiness to implement a technology-based waqf management system integrated with socio-business aspects is still in development and requires in-depth study. Although technological infrastructure such as SIMAM and WaqfMu is available, its use is still not optimal, especially regarding integration, scalability, and ease of access. Muhammadiyah must increase public and stakeholder trust by ensuring that the technology adopted can increase transparency, accountability, and efficiency in waqf management.

Regarding policy and operations, Muhammadiyah has a strong foundation with a structured supervision system and a secure waqf asset ownership mechanism. However, challenges remain regarding incomplete data collection, complicated coordination between assemblies, and complex administrative processes. This shows that the current policy and operational framework do not fully support implementing a more integrated modern technology system.

Moreover, socio-business integration through technology has great potential to support Muhammadiyah's vision of creating broader social and economic impacts. The existing Muhammadiyah Social Enterprise (AUM) can be optimised using digital crowdfunding, blockchain, and productive waqf asset management platforms. However, the success of this integration is highly dependent on the readiness of a more coordinated and efficient infrastructure, policies, and operations.

Muhammadiyah's willingness to adopt waqf management technology has a strong foundation, supported by economic ownership, a wide organisational network, and funding sources through the Muhammadiyah Social Enterprise (AUM). This capital allows Muhammadiyah to expand the application of technology in waqf management. However, this organisation also faces challenges such as incomplete data collection, complicated bureaucracy, and complex internal coordination. To overcome these obstacles, digitalisation of strategies, developing concise systems, and improving technological competence throughout the organisation are needed.

On the other hand, elements in the framework, policies, and operations of Muhammadiyah are not yet fully adequate to support implementing a technology-based waqf management system integrated with socio-business aspects. Therefore, a

comprehensive study is needed to explore the right strategy for legitimising technology adoption by considering the aspects of legitimacy, technology, and socio-business, as well as the challenges and opportunities available. With a holistic analysis, Muhammadiyah can strengthen its organisational readiness and pioneer modern, efficient, accountable, and sustainable technology-based waqf governance in Indonesia.

5.6 SUMMARY

This chapter discusses research objective 1, Muhammadiyah Waqf's policies and operations, by highlighting institutional networks, management policies, and challenges and opportunities for technology integration. Muhammadiyah, through the Waqf Utilisation Council, manages waqf assets in a structured manner with a decentralised approach, involving various levels of organisations from the central to the regional. This system allows flexibility and accountability in managing waqf despite data standardisation and reporting efficiency challenges.

Muhammadiyah has great potential to adopt technology in waqf management, supported by centralised ownership, a vast organisational network, and funds from the Muhammadiyah Social Enterprise (AUM). However, challenges remain, such as incomplete data collection, complicated bureaucracy, and complex internal coordination. To face these challenges, digitalisation, centralised system development, and increased technological competence are needed. The next chapter is needed to find the right strategy to legitimise technology adoption by considering the aspects of legitimacy, technology, and socio-business. If appropriately implemented, Muhammadiyah can become a pioneer in efficient, transparent, and sustainable technology-based waqf management in Indonesia.

CHAPTER SIX

CONSTRUCTION OF MUHAMMADIYAH'S DIGITAL SOCIO-BUSINESS WAQF MODEL (DSB-WM)

6.1 INTRODUCTION

This chapter presents the analysis results related to RQ 2. The previous chapter has conducted an in-depth study of Muhammadiyah's waqf framework and the organisation's readiness to adopt technology. Although Muhammadiyah has excellent potential to integrate technology into waqf management, several significant challenges remain, such as unresolved data collection, complicated bureaucracy, and complex internal coordination. To overcome these challenges, strategic steps are needed in the process of digitalisation, centralised system development, and increasing technological competence at various levels.

Therefore, to realise efficient, transparent, and sustainable technology-based waqf management, this chapter will first construct a waqf technology management model integrated with the socio-business concept designed to be implemented in Muhammadiyah. Furthermore, this model, the Digital Socio-Business Waqf Model (DSB-WM), will be qualitatively validated through an analysis of the views and responses of stakeholders in the Muhammadiyah environment.

This chapter will begin with a review of relevant literature as a basis for the conceptual framework of the DSB-WM. After that, this chapter will discuss in detail the specifications and components of the proposed model. Next, this chapter will explain the methodology and data analysis techniques used to achieve Research Objective #2, which examines the integration of social and business aspects in technology-based waqf management. This chapter will also outline and discuss the main findings of this study, ending with a summary that concludes the discussion of the chapter as a whole.

6.2 THE CONCEPT OF DIGITAL SOCIO-BUSINESS WAQF MODEL (DSB-WM)

Waqf is a social financial instrument supporting economic development and social welfare. In today's digital era, waqf management must be adjusted to modern technology to increase efficiency and transparency. The Socio-Business Waqf Model (DSB-WM), which combines aspects of digital technology with social business, enables waqf management to be more sustainable and contributes to community empowerment. With this model, the potential of the waqf can be optimised to provide added economic value and broader social benefits. This model emphasises the importance of digital waqf literacy, training, and collaboration between stakeholders as key elements. The construction of DSB-WM is based on several fundamental theories that provide a foundation for the application of technology, social business development, literacy, training, capacity building, and collaboration.

- i. **The Technology Acceptance Model (TAM)**, first proposed by Davis (1989) and expanded by Venkatesh and Davis (2000), explains how nazhir and related parties accept technology in managing digital-based waqf assets. TAM helps waqf managers understand factors such as ease of use and perception of technology's benefits that influence the adoption of digital technology.
- ii. **Social Business Theory**, Yunus (2010) describes how social business models are developed by utilising waqf assets to create economic value and social benefits. These **models** enable organisations such as Muhammadiyah to generate income that supports social sustainability.
- iii. **Diffusion of Innovation (DOI)**, as Rogers (2003) explained, helps understand how digital waqf literacy can spread among the community and stakeholders. DOI explains the stages of innovation adoption and factors that influence the spread of digital waqf literacy, including public awareness and accessibility of digital platforms.

- iv. **Human capital theory (Becker's, 1964)** is used to improve the capacity and skills of Nazhir and Waqf staff in asset and technology management. This theory emphasises the importance of investing in human resources through training and capacity building to manage Waqf assets more efficiently.
- v. **Stakeholder theory**, Freeman (1984) explains the importance of collaboration between various stakeholders, such as nazir, the government, community, and business organisations, in supporting the success of technology-based waqf management. According to this theory, collaboration is key to ensuring the success of a social business model based on digital waqf.

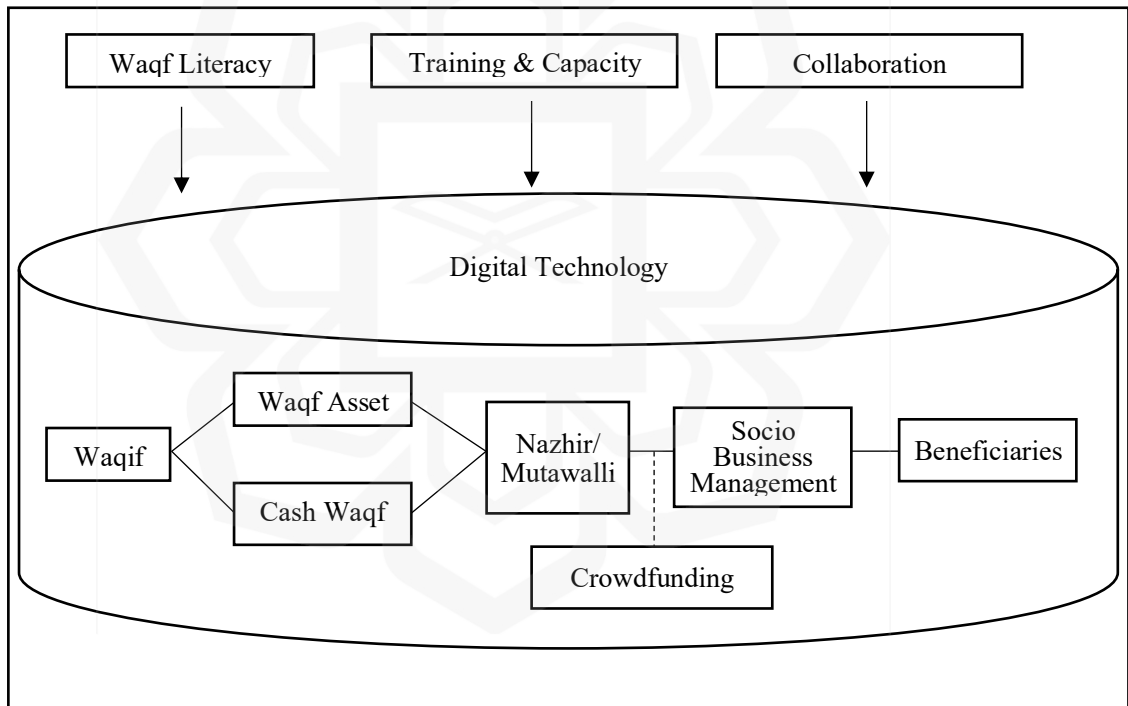


Figure 6.1 Digital Socio-Business Waqf Model

Figure 6.1 provides a comprehensive overview of the digital technology-based waqf management ecosystem, designed to optimise the waqf's potential in supporting social and economic development. In this ecosystem, digital technology is the primary driver that enables waqf management to be carried out more efficiently, transparently, and inclusively. Through technology, important aspects such as waqf literacy, capacity

training for waqf managers (nazir), and collaboration between stakeholders can be significantly improved, creating an ecosystem more adaptive to the challenges of the times. On the other hand, socio-business is present as a strategic mechanism to convert waqf potential into sustainable economic and social value. This approach creates income that can be used for community empowerment and ensures that waqf benefits reach more parties systematically. The principle of sustainability is the foundation of this ecosystem, ensuring that waqf assets and benefits are relevant to current needs and can continue to impact generations. To understand how these three elements of technology, socio-business, and sustainability work synergistically in supporting waqf management, the following presentation will explain each dimension in depth, including its contribution to optimising and strengthening sustainable social impact.

i. Technology Dimension: The Role of Digital Technology in Waqf Management

Digital technology has revolutionised waqf management by increasing efficiency, transparency, and accessibility. Digitalisation speeds up administrative processes through Islamic banking applications and digital wallets, reducing complex bureaucracy. This concept can be explained through the Technology Acceptance Model (TAM) (Davis, 1989; Venkatesh & Davis, 2000), highlighting the importance of ease of use and perceived benefits in adopting waqf technology. In addition, the spread of digital waqf literacy can be done through the Diffusion of Innovations (DOI) model (Rogers, 2003), which explains how technological innovations spread in society. Online campaigns and technology-based training can increase public understanding of digital waqf. Crowdfunding Waqf has also become an innovative solution in fundraising, as explained in a study by Thas Thaker (2018) on factors influencing the adoption of the crowdfunding-waqf model in waqf land development. With blockchain systems and real-time reporting, transparency in waqf fund management is increasing, reducing the risk of misuse of funds and building public trust (Mohaiyadin et al., 2022b).

ii. Social Business Dimension: Integration of Social Business in Waqf

In Waqf, Social business aims to balance financial sustainability and social impact. Social Enterprise Theory (Dees, 1998; Yunus & Weber, 2010) supports this concept by emphasising that waqf can be used to build businesses that benefit society. For example, cash waqf can be invested in community-based MSMEs, with the proceeds reallocated for social purposes. The Shared Value Theory approach (Wieland, 2017) also supports integrating social business in waqf by simultaneously creating economic and social value. Its implementation includes the construction of Waqf Hospitals or Waqf Clinics that provide low-cost or free health services, and using waqf land for community agriculture. In this context, increasing human resource capacity (HR) is also important to ensure the effectiveness of waqf-based social businesses. Human Capital Theory (Becker, 1964) emphasises that investment in training and education can sustainably increase the efficiency of waqf management.

iii. **Sustainability Dimension: Waqf for Sustainable Development**

Sustainability in waqf management includes three main aspects: economic, social, and environmental, as explained in the Triple Bottom Line concept (Elkington, 1997). Economically, waqf-based businesses can create sustainable sources of income, for example, from waqf property rentals or investment in productive projects (Afifi, 2024). From a social perspective, waqf can contribute to community empowerment through education and health services, such as scholarships or waqf-based schools. Regarding the environment, a waqf can be used for environmentally friendly projects such as organic farming and nature conservation. Collaboration between stakeholders in waqf management is also key to increasing its impact. Stakeholder Theory (Freeman, 1984) explains that the involvement of various parties, including the government, philanthropic organisations, and the community, can strengthen the effectiveness of waqf management. Waqf fintech, as discussed by Mohsin (2019), offers innovative solutions in digitising waqf to achieve the Sustainable Development Goals (SDGs), such as poverty alleviation (SDG 1), increasing access to education (SDG 4), creating decent work (SDG 8), and global partnerships (SDG 17).

With a technology-based approach, integration of social business, and sustainability principles, waqf can be a more effective instrument in supporting sustainable social and economic development. A holistic representation of a digital technology-based waqf management system that supports socio-business and sustainability. By utilising technology, strengthening literacy and capacity, and encouraging collaboration, waqf management can achieve sustainable social and economic development goals more effectively. In this context, Muhammadiyah Waqf emerges as a relevant example, given its great potential to adopt and implement the model to expand the socio-economic impact for Muslims.

The Digital Socio-Business Waqf Model, in the context of Muhammadiyah Waqf, presents a new approach that combines digital technology with the principle of social business integration in managing waqf assets. As an organisation with a vast and strong network in the social field, Muhammadiyah has great potential to adopt this model to maximise the potential of its waqf. In this case, Muhammadiyah waqf functions not only as an instrument of philanthropy but also as a resource that can be managed productively for social welfare and economic empowerment. Through digital technology, Muhammadiyah's waqf management can be more transparent, efficient, and accountable. For example, digital platforms allow waqf to be carried out more easily by the wider community, either in cash, physical assets, or digital assets managed centrally and transparently by Muhammadiyah.

6.3 FINDING AND ANALYSIS

Validation through a qualitative approach is a crucial step to ensure the effectiveness of the concept and model in the Digital Business Social Waqf Model. This process is done through in-depth interviews with various stakeholders in the Muhammadiyah Waqf organisation. These interviews provide a more comprehensive understanding of the direct perspectives of waqf actors and the challenges and opportunities in implementing digitalisation and social business models. This qualitative approach allows for more in-depth analysis, considering contextual aspects not always identified in quantitative research.

In qualitative data analysis, software such as NVivo is very helpful in organising and grouping data to identify relevant themes, patterns, and relationships (Chatzopoulou, 2023). It involves several stages, including open coding and thematic coding.

i. Open Coding

Coding is the first step in data analysis. The data is analysed at this stage to identify important elements without using a predetermined framework (Chatzopoulou, 2023; Jackson & Bazeley, 2019). Codes are created based on concepts directly from the data, including significant terms, phrases, or ideas. This process aims to explore the data freely and produce broad codes.

ii. Thematic Coding

After open coding, the data, grouped based on the initial codes, is further analysed to identify significant themes or categories. Thematic coding involves organising codes into a more structured hierarchy, such as significant themes (nodes), sub-themes (sub-nodes), and relationships between themes (Jackson & Bazeley, 2019; Welsh, 2002). This approach helps reveal patterns and explains how data elements relate to each other in the study context.

In NVivo, coding can be done by dragging data segments into appropriate nodes, using the query feature to identify patterns, or creating relationships between nodes for more complex analysis (Jackson & Bazeley, 2019). A hierarchy map provides a comprehensive overview of the key elements influencing waqf management, including legitimacy, technology, social business integration, challenges, opportunities, and innovations. Each theme demonstrates the complexity and diverse factors necessary to create a transparent, efficient, sustainable waqf system. With this holistic approach, waqf management can become a strategic tool in achieving social development and community empowerment goals.

The hierarchy map reveals that legitimacy is the main foundation of waqf management. Compliance with national laws and sharia principles, coupled with public

trust, is key to ensuring the sustainability of the waqf system. In addition, adopting technologies such as digital platforms, online donation features, and real-time analytical tools offers opportunities to improve efficiency, transparency, and security. However, regulatory barriers, resistance to change, and resource constraints remain significant obstacles.

On the other hand, integrating social business models and strategic partnerships provides a new direction to diversify funding and expand the social impact of waqf. Technological innovations like blockchain and AI also open opportunities to overcome classic challenges, while community engagement can increase program acceptance and effectiveness. Thus, waqf management requires an adaptive approach that combines legitimacy, technology, and collaboration to achieve sustainability and relevance in the modern era.

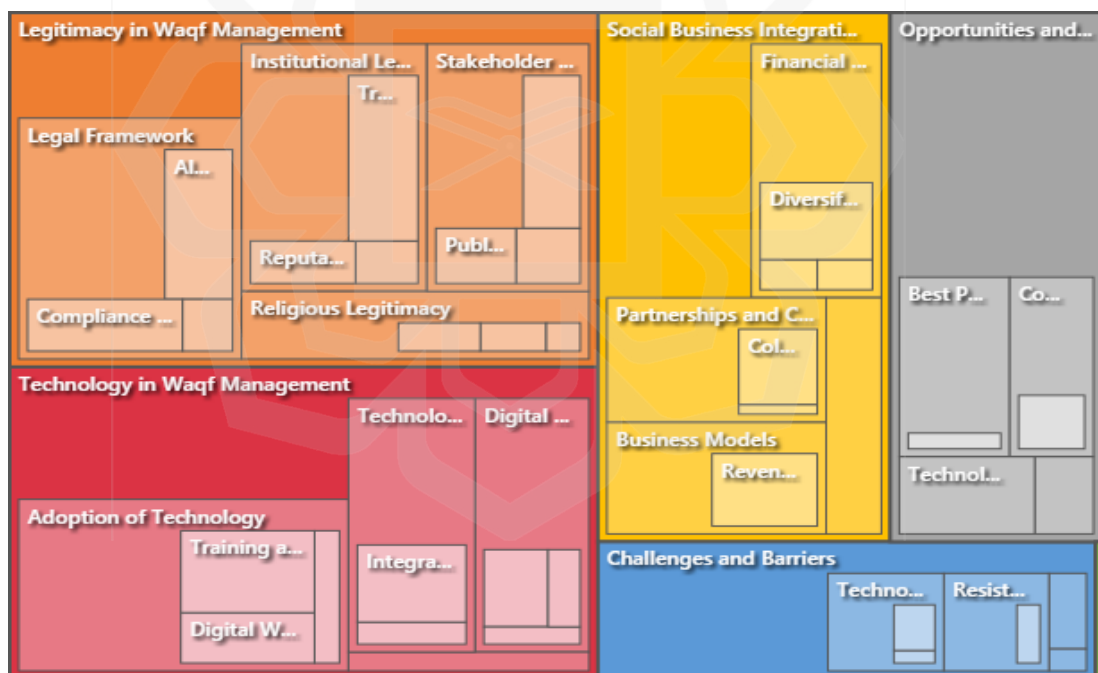


Figure 6.2 Hierarchy Map

The NVivo analysis output in the project map (Figure 6.2) illustrates the relationships between key themes in Muhammadiyah’s waqf management, such as legitimacy, technology, social business integration, challenges, opportunities, and innovations, with various stakeholders. In this analysis, stakeholders act as key

informants, meaning they are the main source of information used to explore various research themes.

Table 6.1 Key Informants

No	Informant Code	Institution/Position
1	MWP	The Council for Waqf Utilisation of the Central Board of Muhammadiyah
2	MWP DKI Jakarta	The Provincial Board of Muhammadiyah in Jakarta
3	MWP DI Yogyakarta	The Provincial Board of Muhammadiyah in Yogyakarta
4	MTT	The Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah
5	IT Expert	IT Expert Muhammadiyah
6	MEBP	The Council for Economy, Business, and Tourism of the Central Board of Muhammadiyah

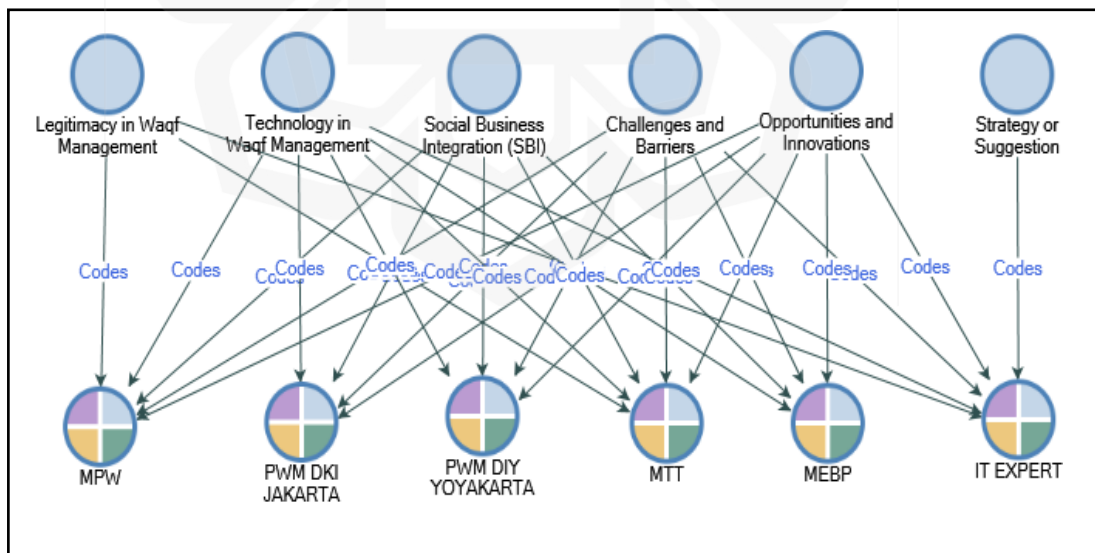


Figure 6.3 Mapping Stakeholders with Relevant Theme

Figure 6.3 is the analysis using NVivo, which shows the relationship between various main themes and sources of information in the study. The main themes analysed, such as Legitimacy in Waqf Management, Technology in Waqf Management, Social Business Integration (SBI), Challenges and Barriers, Opportunities and Innovations, and Strategy or Suggestion, are connected to various source categories, namely MPW, PWM DKI JAKARTA, PWM DIY YOGYAKARTA, MTT, MEBP, and IT EXPERT. The lines connecting the themes to the sources indicate that references or data in the source are relevant to a particular theme. The more lines connecting a source to a theme, the stronger the connection.

From the visualisation, MPW, PWM DKI JAKARTA, and PWM DIY YOGYAKARTA have extensive connections with various themes, indicating that these organisations have broad insights into waqf, technology, and social innovation. Meanwhile, IT EXPERT are more associated with the theme of technology and strategy, which shows their important role in providing technology-based solutions for waqf management. MEBP and MTT also connect with several themes, but focus on innovation and social business integration challenges.

Overall, these results show how various sources of information contribute to the research theme. By looking at this pattern of connections, it can be identified which themes are more dominant in various source categories. These results can also be used to support further analysis, such as exploring the depth of insight of each source on a particular theme or identifying patterns of actor involvement in waqf management and social business innovation.

In this analysis, in addition to insights obtained from stakeholders as key informants, information is also strengthened by various additional sources, such as Focus Group Discussion (FGD) Sustainable Financing, Seminar on the Challenges of Muhammadiyah in the Digital Era, and Report on the National Work Meeting 2022 of the Council for Waqf Utilisation. These sources provide a broader context to the issues raised in the study while complementing the stakeholders' perspectives.

6.3.1 Theme 1: The Legitimacy of Technology in Waqf Management

Legitimacy in waqf management involves a process in which waqf managers, as religious institutions, gain trust and recognition from the community, government, and parties involved in the waqf ecosystem. In the context of Muhammadiyah, which has strong roots in Islamic society and tradition, legitimacy includes compliance with formal regulations. It relates to the fulfilment of ethical, moral, and social values recognised by the community. The application of technology in waqf management poses challenges in terms of legitimacy, considering that technology is often seen as something modern and foreign to some groups, especially in traditional religious circles. Therefore, Muhammadiyah needs to ensure that the use of technology in waqf management is in line with Islamic principles and can be accepted by all stakeholders, from donors (waqif), beneficiaries (*mauquf'alah*), and regulators.

NVivo software helps organise and map qualitative data from in-depth interviews, focus group discussions (FGDs), and official documents. This analysis will identify factors that influence the legitimacy of technology-based waqf management in Muhammadiyah, such as support for sharia rules, influence from external parties such as regulators and government policies, and public acceptance of digital innovation. Furthermore, this analysis will explore three main dimensions of legitimacy (Suchman, 1995):

- i. **Normative legitimacy:** the extent to which waqf management with digital technology follows the shariah values and ethics recognised in Islamic society.
- ii. **Cognitive legitimacy:** the public's understanding and perception of the use of technology in waqf management and whether the technology is legitimate and beneficial.
- iii. **Regulatory legitimacy:** compliance with formal regulations set by the government and waqf institutions, and how Muhammadiyah navigates existing regulations to ensure the integration of digital technologies.

In the context of this research, the results of the N-vivo analysis will provide a more detailed picture of how actors in Muhammadiyah, including waqf managers, the community, and other stakeholders, understand and respond to the application of technology in waqf management. In addition, this analysis will help identify potential obstacles or challenges that Muhammadiyah may face in maintaining the legitimacy of modern waqf management while offering strategic recommendations to ensure that technology-based waqf management is not only legally valid but also socially and spiritually acceptable. These findings will be invaluable in understanding how Muhammadiyah can maintain its important role in managing waqf professionally and transparently while adhering to the basic principles of sharia amidst rapid technological developments.

Table 6.2 Reference and Coverage Legitimacy in Waqf Management

Informant	References	Coverage
Council for Waqf Utilisation	1	1,15%
Council for Religious Opinion and Tajdid	8	18,57%
IT Expert in Muhammadiyah	4	1,93%
2022 National Work Meeting Report	1	0,26%

Based on the analysis using NVivo (Table 6.1), the use of technology in the management of Muhammadiyah waqf shows that the aspects of Islamic law and fatwas have the most considerable portion in the discussion, followed by technical aspects and data protection regulations. The Council for Waqf Utilisation has one reference with a coverage of 1.15%, indicating that the role of this body in discussions on technology in Waqf management is still limited. However, it remains relevant in the context of shariah compliance.

"To ensure sharia legitimacy in implementing technology for waqf management, Muhammadiyah relies on two sources: the Fatwa of the Tarjih Council (Majelis Tarjih) of the Central Board of Muhammadiyah and the duties and authority of the Sharia Supervisory Board (DPS) of the Council for Waqf Utilisation of the Central Board of Muhammadiyah" (Informant #1: Council for Waqf Utilisation)

The Council for Religious Opinion and Tajdid has eight references with a coverage of 18.57%, indicating dominance in discussions about the relationship between fiqh and technology. Technology can be used in the context of waqf fiqh because Islamic law has a rational aspect (*ma'qulatul ma'na*) that allows for changes in its implementation, including modern tools. Islamic legal principles, such as *al-amru bi-asyai amrun bi-wasaa'ilihi* (the command to do something also means the command to use the necessary means), can be applied.

"The relationship between fiqh and technology can be explained through several statements: Fiqh can be synonymous with Islamic law. There are areas of Islamic law whose implementation is rational (ma'qulatul ma'na/understandable/have legal reasoning) and those that are devotional (ta'abbudi/rituals, all determined by Shariah, by Allah and His Prophet). Even in rituals, rational elements, such as tools, can change over time. In this regard, technology comes into play. A legal maxim in Islamic law can be contextualised regarding technology: Al-amru bi-asyai amrun bi-wasaa'ilihi (An order to do something implies an order to take the necessary means to accomplish it). For example, a plane that carries pilgrims to Mecca. In the context of waqf fiqh, internet banking can be used to donate cash waqf and other forms of waqf digitisation, such as the waqf asset management information system (SIMAM) in Muhammadiyah and the government." (Informant #4: Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah)

Meanwhile, the IT Expert in Muhammadiyah has four references with a coverage of 1.93%, which, although small in scope, still makes an important contribution to discussing technology's technical and security aspects in digital waqf management.

"Technical measures adopted by FinTech to protect privacy include encryption, tokenisation, multi-factor authentication (MFA), and strengthening APIs in data exchange. Indonesia also has the Personal Data Protection (PDP) Law, which regulates customer data protection with administrative sanctions for violations and helps protect privacy in online waqf transactions." (Informant #5: Technology Expert in Muhammadiyah Organisation)

Finally, the 2022 National Work Meeting Report has one reference with a coverage of 0.26%, confirming Muhammadiyah's support for accelerating waqf utilisation through a systemic and progressive approach.

"The Central Board of Muhammadiyah will fully support the legalisation aspect of the plan to accelerate the utilisation of Waqf. Muhammadiyah requires acceleration of capacity building interconnection across assemblies and institutions with a vision of excellence through easy, systemic, dynamic, and progressive instruments that can produce superior and progressive Muhammadiyah movements." (Report on the 2022 National Work Meeting 2022 of The Council for Waqf Utilisation)

Thus, using technology to manage Muhammadiyah waqf requires balancing shariah compliance, technological security, and organisational policy support to accelerate waqf digitalisation. This balance is key to ensuring that technological innovation remains in line with Islamic principles, protects users, and receives strong structural support from the organisation. Through a systematic and progressive approach, Muhammadiyah can pioneer the digital transformation of waqf management, increasing efficiency and expanding the reach and benefits of waqf for the wider community.

6.3.2 Theme 2: The Adoption of Technology in Waqf Management

Technology in waqf management is one of the important innovations in waqf asset management to answer modern challenges, such as the need for transparency, efficiency, and accountability. Applying this technology involves various approaches designed to optimise the management process, increase community participation, and maximise the benefits of waqf. Digitisation of waqf asset data is one of the crucial first steps, allowing all information about waqf assets, including their legal status, location, and economic value, to be systematically recorded in a digital-based database. This helps waqf managers access data quickly, accurately, and safely.

Application-based technology has also begun to be adopted, such as a waqf management platform that allows users to participate in cash waqf online (Mohsin, 2016). This application makes it easy for the public to distribute waqf anytime and anywhere, increasing inclusivity and public awareness of waqf. On the other hand, blockchain technology offers greater transparency and security in recording waqf transactions (Mutmainah et al., 2021), ensuring that each process is well recorded and cannot be changed, thereby increasing public trust.

Cross-agency data integration is one of the technological advantages of waqf management, allowing managers to monitor assets in real time and make data-driven decisions. With the support of big data technology and analytics, waqf management organisations, such as Muhammadiyah, can project the potential development of waqf assets in the future, such as the management of waqf land for productive projects or the use of waqf funds for sustainable investment. In addition, reports and evaluations can be carried out more quickly and accurately, making it easier for managers to account for the use of funds by donors and related parties.

Furthermore, technology allows waqf management to support social and economic programs strategically. For example, waqf assets can be optimised for developing educational facilities, health services, or community economic empowerment, the impact of which can be felt widely. By combining technology and sharia principles, waqf management can be more effective in answering the needs of the people while increasing the role of waqf as an important instrument in sustainable development. Adopting this technology improves operational efficiency and strengthens the waqf's position as one of the pillars of the Islamic economy that is innovative and relevant in the digital era.

Technology is important in transforming waqf management, especially in organisations as large as Muhammadiyah, which have a strategic role in waqf management. To understand the role of various parties and their respective contributions in applying this technology, an analysis was carried out using NVivo to identify reference sources and the coverage of topics related to technology in waqf management. The following table presents the analysis results, which include contributions from various councils, IT experts, and strategic reports and discussions. This data provides a comprehensive overview of how much technology adoption has involved various elements of the Muhammadiyah organisation and their contribution to developing and implementing technology in waqf management.

Table 6.3 Reference and Coverage Technology in Waqf Management

Informant	References	Coverage
Council for Waqf Utilisation	2	2,74%
Provincial Board of Muhammadiyah Jakarta	1	8,46%
Provincial Board of Muhammadiyah Yogyakarta	4	5,52%
Council for Religious Opinion and Tajdid	3	4,64%
IT Expert in Muhammadiyah	10	4,12%
Council for Economy, Business, and Tourism	2	4,63%
Focus Group Discussion	1	0,49%
2022 National Work Meeting Report	6	0,44%

Based on NVivo's analysis of technology in waqf management, the data (Table 6.2) shows that Muhammadiyah is strongly committed to implementing technology to optimise waqf management, as reflected in various findings and interviews with various parties. The Council for Waqf Utilisation of the Central Board of Muhammadiyah (2.74%) noted that fintech and blockchain are strategic opportunities for strengthening productive waqf financing schemes.

The Council for Waqf Utilisation views fintech and blockchain as opportunities to strengthen the financing scheme for productive waqf. However, they also present challenges in preparing professional human resources (HR) and establishing a digital financing system.” (Informant #1: Council for Waqf Utilisation of the Central Board of Muhammadiyah)

The Provincial Board of Muhammadiyah Jakarta, with an involvement coverage of 8.46%, has implemented SIMAM (Muhammadiyah Waqf Asset Management Information System) in recording waqf assets. This system has greatly benefited asset management, especially in increasing data accessibility and transparency. The Provincial Board of Muhammadiyah Yogyakarta (5.52%) also significantly used SIMAM technology for waqf asset inventory and transparent monitoring. This system has even been integrated with the Geographic Information System (GIS) to provide more accurate waqf asset mapping.

“The technology used is SIMAM (Muhammadiyah Waqf Asset Management Information System), which helps record waqf assets. However, the system needs further development, such as mobile compatibility, to make access easier.” (Informant #2: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Jakarta)

“Technology like SIMAM helps inventory waqf assets, facilitates monitoring, and transparently provides data access. This system is also integrated with a Geographic Information System (GIS) for waqf asset mapping.” (Informant #3: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Yogyakarta)

The Council for Religious Opinion and Tajdid (4.64%) emphasised that digitalisation is very helpful in the transparency of waqf management, especially in publishing waqf organisation financial reports to the public. This includes cash waqf and mosque construction projects.

“Yes, it (technology) is, and it is beneficial. For example, waqf organisation financial reports can be published for the public through digitisation, such as on social media, especially for cash waqf or projects like mosque construction.” (Informant #4: Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah)

Meanwhile, IT experts in Muhammadiyah (4.12%) revealed that peer-to-peer lending-based sharia fintech is today's most relevant technology in waqf management. Other technologies, such as the Internet of Things (IoT), are starting to be applied for remote monitoring of physical waqf assets, while blockchain is one of the innovations that can increase the security and transparency of waqf asset management. Generative AI is also seen as a new opportunity to improve public education and literacy about cash waqf.

“The most relevant technology for waqf management today is fintech, particularly Financial Technology involving sharia-compliant peer-to-peer lending. Additionally, Internet of Things (IoT) technology monitors the status of waqf assets remotely. IoT helps secure physical waste assets, such as land or buildings, by installing sensors that periodically send signals. Blockchain was also discussed as a potential technology for waqf management, but it has yet to be widely implemented due to limitations in the ecosystem and human resources. Another promising technology is Generative AI, especially for collecting cash waqf, as public literacy on

waqf is still very low.” (Informant #5: Technology Expert in Muhammadiyah Organisation)

From an economic perspective, the Council for Economy, Business, and Tourism (4.63%) emphasised that digital technology has been integrated into the traditional waqf system through various innovations such as crowdfunding, blockchain, smart waqf apps, and data analysis that increase efficiency, transparency, and accessibility. The waqf model is also increasingly developing with the existence of stock waqf, insurance waqf, productive land waqf, and productive capital waqf that optimise the use of waqf assets.

“Digital technology is integrated into traditional waqf practices and systems through the digitalisation of waqf. Various technologies, such as blockchain, crowdfunding, smart waqf apps, and data analysis, improve efficiency, transparency, and accessibility in waqf management and fund distribution. MEBP also proposes innovations in waqf management models, such as waqf shares, waqf insurance, productive land waqf, and productive capital waqf.” (Informant #6: Council for Economy, Business, and Tourism of the Central Board of Muhammadiyah)

The Focus Group Discussion (FGD) (0.49%) highlighted Muhammadiyah's social business model, which includes optimising waqf assets, collaboration with the Muhammadiyah Merchant Network, and the use of crowdfunding and cash waqf-linked sukuk to collect waqf funds.

“The key elements of Muhammadiyah’s social business model include optimising waqf assets, collaborating with the Muhammadiyah Merchant Network, and using crowdfunding and cash waqf-linked sukuk schemes to collect waqf funds. Additionally, SIMAM (Muhammadiyah Asset Management Information System) is integrated to record and manage waqf assets more effectively.” (Focus Group Discussion)

The 2022 National Work Meeting Report (0.44%) stated that Muhammadiyah's strategic priority is using digital technology in waqf management, especially in strengthening digital systems to increase transparency and efficiency in waqf asset governance.

“Strategic priorities such as leveraging digital technology in waqf management and developing digital-based financing schemes can support technology legitimacy. Strengthening digital systems for asset data management and waqf governance will enhance transparency and efficiency, ultimately bolstering technology’s legitimacy within Muhammadiyah. “ (The 2022 National Work Meeting Report)

Muhammadiyah has adopted various technologies in waqf management, with SIMAM as the central system for recording and managing waqf assets. Shariah fintech, crowdfunding, blockchain, IoT, and AI are the main pillars in increasing the efficiency and transparency of waqf management. With a strong commitment to digitalisation, Muhammadiyah strives to ensure that technology can genuinely increase the effectiveness and efficiency of sustainable waqf management.

6.3.3 Theme 3: The Integration of Social Businesses for Sustaining Waqf Management

Social Business Integration (SBI) is an approach that combines social, economic, and spiritual values in business management to create sustainable social impact (Ogliastri et al., 2015b). In the context of waqf management in Muhammadiyah, SBI can strengthen religious legitimacy, accountability, and community empowerment. As an organisation with a strong tradition in waqf management, Muhammadiyah can utilise SBI to integrate religious and social practices with a business model oriented towards community welfare.

One of the primary keys in SBI is building public trust through transparency and support from religious institutions. In waqf management, this is realised through the importance of support from ulama, especially through the Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah, which issues fatwas as sharia guidelines. These *fatwas* provide religious legitimacy and ensure that waqf management is under sharia principles and relevant to the community's needs. In addition, collaboration between councils within Muhammadiyah, such as the Council for Waqf Utilisation, the Council for Economy, Business, and Tourism, and the Provincial Board of Muhammadiyah, is a real example of how religious values can be

implemented in professional waqf management practices that are oriented towards social impact.

Within The Integration of Social Businesses for Sustaining Waqf Management, SBI ensures that waqf is managed legally under sharia and encourages innovation by applying technology and data-based approaches. Muhammadiyah can utilise analytical software to map community needs and evaluate the effectiveness of waqf programs. Thus, transparency and accountability in waqf management are further strengthened, which ultimately increases public trust in the managing institution.

Furthermore, in the context of community empowerment, SBI emphasises the importance of a business model that generates financial benefits and has a social impact. Waqf management in Muhammadiyah has demonstrated the actual implementation of SBI in the education, health, and economic empowerment sectors. The results of waqf asset management support social programs that directly impact the community, such as educational scholarships, free health services, and micro-business development.

By implementing the principles of SBI, Muhammadiyah can ensure that waqf management is an instrument of worship and a tool for sustainable social transformation. This approach integrates religious values with modern needs, creating a waqf management model that is not only religiously relevant but also able to provide solutions to the community's social and economic challenges. Thus, integrating social businesses to sustain waqf management can be an effective strategy for optimising the role of waqf as a driving force for community welfare.

Table 6.4 Reference and Coverage Social Business Integration (SBI)

Informant	References	Coverage
Council for Waqf Utilisation	5	8.23%
Provincial Board of Muhammadiyah Jakarta	3	11.22%
Provincial Board of Muhammadiyah Yogyakarta	5	19.65%
Council for Religious Opinion and Tajdid	4	7.66%
Council for Economy, Business, and Tourism	4	14.79%
Focus Group Discussion	3	0.61%
2022 National Work Meeting Report	8	0.66%

Based on NVivo's analysis, the integration of social businesses to sustain waqf management is based on findings and interviews with various parties in the Muhammadiyah environment. The data (Table 6.3) shows that the Council for Waqf Utilisation of the Central Board of Muhammadiyah (8.23%) emphasises balancing the social and commercial aspects of waqf investment. However, in practice, waqf management tends to focus more on the social aspect, so a better strategy must be developed for developing a sustainable social business model.

Ideally, Muhammadiyah should balance the social and commercial aspects through investments. However, there is a gap, as waqf management tends to focus more on the social aspect. (Informant #1: Council for Waqf Utilisation of the Central Board of Muhammadiyah)

The Provincial Board of Muhammadiyah Jakarta (11.22%) provides a concrete example of social business integration in waqf through the sports centre development project in Gunung Sindur. This project is designed to provide economic benefits to the surrounding community through sports activities and local businesses that can develop in the surrounding area. The Provincial Board of Muhammadiyah Yogyakarta (19.65%) also contributes significantly to integrating social business into waqf management. Some examples of successful implementation are the Muhammadiyah Business Centre in Kulon Progo and the partnership with PKU Kota Gede, which combines the health and business sectors in one productive waqf ecosystem.

“A successful example is the planned sports centre in Gunung Sindur, which will provide economic benefits to the surrounding community through sports activities and local businesses.” (Informant #2: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Jakarta)

“Muhammadiyah Business Centre in Kulon Progo and partnerships with PKU Kota Gede are examples of successful social-business integration in waqf management in health and business. “(Informant #3: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Yogyakarta)

From an Islamic perspective, the Council for Religious Opinion and Tajdid (7.66%) emphasised that the limitations in waqf-based social businesses must refer to

Islamic economics and business ethics as regulated in the Himpunan Rumusan Tarjih (HPT) Volume 3. In practice, the absence of fraud, usury, and activities not under sharia must be the basis for managing waqf-based social businesses. In addition, a Sharia Supervisory Board is needed in the waqf management structure to ensure compliance with shariah principles, which have been accommodated in the Council for Waqf Utilisation after the Muhammadiyah Congress in Solo.

“In my view, the boundaries must refer to Islamic economics and business ethics, as decided by the Majelis Tarjih Muhammadiyah in its National Deliberation in Jakarta (as outlined in HPT Volume 3). For example, there must be no fraud, usury, or the like elements.” (Informant #4: Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah)

“At least, there must be a shariah supervisory board within the Waqf management structure, which can provide shariah opinions on Waqf asset development and ensure its compliance with shariah. This is interesting, and it is already part of the structure of the Majelis Pendaayagunaan Wakaf Muhammadiyah after the Muhammadiyah Congress in Solo.” (Informant #4: Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah)

From an economic perspective, the Council for Economy, Business, and Tourism (14.79%) highlighted that one of the challenges in integrating social businesses into Waqf is the traditional mindset of waqf asset management. Many assets are idle or underutilised due to a lack of optimal management. Therefore, new strategies in managing Waqf assets must be directed at developing businesses that can provide long-term benefits.

The main challenge is the mindset in managing waqf assets, which is still traditional. Many assets are left idle or underutilised due to insufficient management. (Informant #6: Council for Economy, Business, and Tourism of the Central Board of Muhammadiyah)

In the Focus Group Discussion (FGD) (0.61%), it was conveyed that the financial impact of the social business model on waqf performance has not been optimally measured. One of the main recommendations is developing a waqf financial performance measurement mechanism based on asset development results. A model

that can be adapted is the endowment fund system used by international universities to improve the sustainability of waqf management.

“The financial impact of the social business model on waqf performance has not yet been optimally measured. One recommendation is to develop a mechanism for measuring the financial performance of waqf through asset development outcomes. “Muhammadiyah could adopt financial management models similar to those used by international universities through endowment fund systems.” (Focus Group Discussion)

The 2022 National Work Meeting Report (0.66%) conveyed that the legitimacy of integrating social business and waqf can be strengthened through stricter regulations, digital-based transparency, and the involvement of experts in waqf management. Supported by technology, social business integration can optimise waqf assets for the community's welfare while still adhering to sharia principles and the social goals of the Muhammadiyah organisation.

“Muhammadiyah can ensure legitimacy by strengthening regulations, promoting transparency through digital systems, and involving experts in waqf management. With technology-supported social-business integration, Muhammadiyah can optimise waqf assets for the welfare of the ummah while adhering to shariah principles and the organisation’s social objectives (2022 National Work Meeting Report).

Muhammadiyah has developed various forms of social business integration in waqf management. Various projects, such as the sports centre in Gunung Sindur, the Muhammadiyah Business Centre in Kulon Progo, and the partnership with PKU Kota Gede, show that the waqf-based social business model can provide economic benefits while fulfilling social goals. With the support of regulations, digital transparency, and the involvement of experts, Muhammadiyah can continue to optimise waqf assets for the sustainability and welfare of the community.

6.3.4 Theme 4: The Challenges and Barriers to Adopting DSB-WM

Challenges and obstacles must be considered when adopting Digital Social Business for Waqf Management (DSB-WM). Digital transformation in waqf management requires sophisticated technology, human resource readiness, supporting regulations, and

acceptance from the community and stakeholders. The main challenges include resistance to change, limited technological infrastructure, and the digital literacy gap among waqf managers and beneficiaries.

In addition, trust and security in digital platforms are the main concerns when implementing DSB-WM. The security of donor data, transparency in the management of waqf funds, and compliance with shariah principles in digital transactions must be ensured so that this system can operate properly and gain legitimacy from the community and religious authorities. Therefore, a comprehensive strategy is needed to overcome these obstacles, including technology training for waqf managers, strengthening regulations, and increasing digital literacy among the community. The results of N-vivo research will be analysed to discuss the challenges and obstacles to further adopting DSB-WM. This research will also explore stakeholders' perspectives regarding the effectiveness and implementation of this model in Waqf management in Muhammadiyah.

Table 6.5 Reference and Coverage Challenges and Barriers

Informant	References	Coverage
Council for Waqf Utilisation	2	1,40%
Provincial Board of Muhammadiyah Jakarta	3	4,34%
Provincial Board of Muhammadiyah Yogyakarta	3	5,63%
Council for Religious Opinion and Tajdid	1	0,99%
IT Expert in Muhammadiyah	8	5,02%
Council for Economy, Business, and Tourism	2	3,00%
Focus Group Discussion	2	0,31%
2022 National Work Meeting Report	2	0,10%

Based on data analysis using NVivo related to challenges in adopting Digital Social Business Waqf Management (DSB-WM), it was found that the most significant contribution came from IT Experts in Muhammadiyah, with 8 references covering 5.02% of the total data. This emphasises the importance of information technology in identifying and overcoming obstacles to implementing DSB-WM. In addition, the

Provincial Board of Muhammadiyah Yogyakarta of Yogyakarta and Jakarta each provided 3 references, with a coverage of 5.63% and 4.34%. This contribution shows that the support and involvement of regional leaders are crucial in overcoming challenges, especially those related to local regulations and policies. The Council for Economy, Business, and Tourism contributed 2 references with a coverage of 3.00%, indicating their role in analysing business models and effective waqf management strategies in a digital context. Meanwhile, the Council for Waqf Utilisation and the Council for Religious Opinion and Tajdid each contributed with a coverage of 1.40% and 0.99%, respectively, which remain important in providing views on the utilisation of waqf and the adjustment of Islamic law to the implementation of DSB-WM. The Focus Group Discussion and the 2022 National Working Meeting Report had smaller coverage, at 0.31% and 0.10%, respectively, perhaps due to the more general nature of the discussions and reports, but still provided valuable insights into the challenges of DSB-WM implementation. The main challenges in adopting Digital Social Business Waqf Management (DSB-WM) in Muhammadiyah can be categorised into several aspects: limited human resources (HR), limited technology and infrastructure, implementation costs, and low waqf literacy in the community.

6.3.4.1 Limited Human Resources (HR) and Traditional Mindset

One of the biggest obstacles in waqf digitalisation is the lack of professional personnel with expertise in information technology and waqf management. The Provincial Board of Muhammadiyah Jakarta and Yogyakarta stated that waqf management is still based on voluntarism, so many waqf assets cannot be utilised productively. The Council for Economy, Business, and Tourism also added that many waqf assets are left neglected due to the lack of professional personnel and traditional mindsets that hinder innovation in waqf management. The Council for Religious Opinion and Tajdid, Focus Group Discussion and Seminar highlighted that even though digital systems such as SIMAM are available, many waqf managers still maintain conventional methods due to a lack of understanding of the benefits of digitalisation.

“The main obstacles are HR’s lack of technological skills...” (Informant #2: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Jakarta)

“The main challenge is the lack of professional human resources, and waqf asset management is still based on voluntarism. Muhammadiyah DIY has over 6,000 waqf asset certificates, but there is a lack of staff to manage them productively. “ (Informant #3: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Yogyakarta)

“However, many of our waqf nazhirs still use traditional methods in waqf management. For instance, in managing Muhammadiyah waqf assets, we already have SIMAM”. (Informant #4: Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah)

“The main challenge is the mindset in managing waqf assets, which is still traditional. Many assets are left idle or underutilised due to insufficient management”. (Informant #6: Council for Economy, Business, and Tourism of the Central Board of Muhammadiyah)

“However, the implementation of SIMAM is still limited due to incomplete data and a lack of competent HR across regions.”. (Focus Group Discussion)

“Lack of competent human resources (HR): Many nazir (waqf managers) are not yet professional, and there is insufficient training and certification for nazir.” (Seminar Digitalisation Muhammadiyah Waqf)

6.3.4.2 Technology and Infrastructure Limitations

The SIMAM system, designed to support waqf digitalisation, still has limitations in its implementation. The Provincial Board of Muhammadiyah Jakarta revealed that SIMAM is not yet fully compatible with mobile devices, making it difficult for waqf managers to access and utilise this technology optimally. In addition, the IT Expert in Muhammadiyah added that incomplete data and a lack of competent human resources in various regions also hamper the implementation of SIMAM. Hence, the effectiveness of this system is not optimal.

“.... the limitations of SIMAM, which is not yet fully compatible with mobile devices. In addition, some managers see the technology as too complex.” (Informant #2: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Jakarta)

“The main challenge is the lack of agreement among stakeholders on the technology used. Barriers related to human resources, budget, and technology capacity also exist. On a larger scale, integration requires support from regulators or authorities to set technological standards and policies.” (Informant #5: Technology Expert in Muhammadiyah Organisation)

6.3.4.3 Technology Implementation Costs

Waqf digitalisation requires high costs for technology infrastructure, HR training, and data management. The Provincial Board of Muhammadiyah Yogyakarta highlighted that the high cost of purchasing servers and other technological devices is a significant obstacle in implementing SIMAM. In some cases, Muhammadiyah still must rent technology infrastructure from universities because it does not yet have an independent system. The IT Expert in Muhammadiyah also confirmed that technology costs are a significant factor in the slow adoption of waqf digitalisation in various regions.

“The main obstacles are the high cost of technology, such as purchasing servers, and the limited availability of skilled human resources in information technology (IT). Muhammadiyah DIY still relies on volunteers and rents technology infrastructure from universities”. (Informant #3: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Yogyakarta)

“The main challenge is the lack of agreement among stakeholders on the technology used. Barriers related to human resources, budget, and technology capacity also exist. On a larger scale, integration requires support from regulators or authorities to set technological standards and policies.” (Informant #5: Technology Expert in Muhammadiyah Organisation)

6.3.4.4 Low Waqf Literacy in Society

One of the biggest challenges in developing digital-based waqf is the low public understanding of cash and digital waqf. The Council for Waqf Utilisation stated that low literacy, socialisation, and education regarding cash waqf make it challenging to implement the waqf financing scheme optimally. The Provincial Board of

Muhammadiyah in Jakarta and the 2022 National Working Meeting report also highlighted that many people do not yet understand the benefits of waqf digitalisation, so waqf fund collection and asset management are still not optimal.

“The biggest challenge Muhammadiyah faces in waqf management in the digital era is financing. The financing scheme for cash waqf or waqf through cash faces issues such as low literacy, socialisation, and education regarding cash waqf. Cash waqf involves collecting money where the principal remains intact, and the margin is used for waqf financing. For instance, if 1 million Muhammadiyah members each donated 1 million rupiahs, it would accumulate 1 trillion rupiahs, with a 5% return on the 1 trillion for waqf. The challenge lies in gathering such a large amount of money, especially amid the current economic difficulties. Nevertheless, Muhammadiyah remains optimistic that this can be achieved through cash waqf schemes directly financing the construction of mosques, schools, and other social facilities.” (Informant #1: Council for Waqf Utilisation of the Central Board of Muhammadiyah)

“The community’s response has been limited, as literacy on digital waqf is still low and requires further education.” (Informant #2: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Jakarta)

“The main challenges include a lack of waqf literacy in society, limited Nazhir certification and competence, and suboptimal asset management. Additionally, access to funding for waqf development remains limited, and utilising waqf assets effectively is complex.” (Report on the National Work Meeting 2022 of The Council for Waqf Utilisation)

6.3.4.5 Lack of Coordination and Collaboration

The lack of coordination between Waqf managers at the central and regional levels makes implementing Waqf digitalisation ineffective. This is also exacerbated by the Waqf management system, which is still based on voluntarism, making coordination and standardisation of asset management difficult.

“The Waqf Management Council coordinates waqf management within Muhammadiyah's organisational levels in a tiered manner. At the central level, the Council is responsible for developing policies, rules, and norms for waqf governance. At the regional level, the Council coordinates the implementation of these policies to ensure that waqf governance is

understood and executed productively in the districts and branches across Indonesia. However, this national coordination is not yet fully operational due to various challenges, including that much of this coordination is voluntary.” (Informant #1: Council for Waqf Utilisation of the Central Board of Muhammadiyah)

‘... Voluntary nature of waqf management: The management is mainly voluntary, leading to suboptimal utilisation of waqf assets and a lack of coordination between central and regional levels in implementing digital management systems.’ (Seminar Digitalisation Muhammadiyah Waqf)

6.3.5 Theme 5: The Opportunities and Innovations in DSB WM

Muhammadiyah's waqf management has undergone a significant transformation, utilising digital technology to increase effectiveness and efficiency. Innovations such as digital platforms and modern information systems have been implemented to facilitate the collection and management of cash waqf and increase transparency and accountability. For example, the development of a digital information system for the management of Muhammadiyah cash waqf has positively impacted farmers in Indonesia by facilitating a more efficient and targeted distribution of funds.

In addition, implementing a waqf-based digital social business model has opened new opportunities to empower the people's economy. Using technology such as crowdfunding and blockchain allows for broader community participation in waqf and ensures more transparent and accountable fund management. This aligns with Muhammadiyah's efforts to optimise the potential of waqf for sustainable development and social welfare.

However, the application of digital innovation in waqf management is not free from challenges, as in previous findings. A deep understanding of risk management and competency development in management and operations is the key to success. Therefore, in-depth analysis through the NVivo analysis tool involving stakeholder interviews is fundamental to identifying opportunities and innovations in implementing a waqf-based digital social business model in the Muhammadiyah environment. This

approach is expected to provide strategic recommendations to improve the effectiveness and sustainability of waqf management in the digital era.

Table 6.6 Reference and Coverage Opportunities and Innovations

Informant	References	Coverage
Council for Waqf Utilisation	4	5.00%
Provincial Board of Muhammadiyah Jakarta	2	0.12%
Provincial Board of Muhammadiyah Yogyakarta	4	3.60%
Council for Religious Opinion and Tajdid	1	1.93%
IT Expert in Muhammadiyah	5	2.19%
Council for Economy, Business, and Tourism	2	5.24%
Focus Group Discussion	2	0.35%
2022 National Work Meeting Report	19	2.12%

Several key findings based on NVivo data analysis related to opportunities and innovations in Digital Social Business Waqf Management (DSBWM) can be highlighted. The 2022 National Work Meeting Report contributed the most considerably, with 19 references and a coverage of 2.12%, emphasising the importance of national coordination in driving DSBWM innovation. The Council for Economy, Business, and Tourism contributed 2 references with a coverage of 5.24%, indicating the strategic role of the economic and tourism sectors in identifying opportunities for DSBWM development. The Council for Waqf Utilisation and the Provincial Board of Muhammadiyah Yogyakarta each provided 4 references, with a coverage of 5.00% and 3.60%, focusing on optimising waqf utilisation and innovation at the regional level. The contribution of IT Experts in Muhammadiyah, with 5 references and coverage of 2.19%, highlighted the importance of technological expertise in developing digital solutions for waqf management. Although the Provincial Board of Muhammadiyah Jakarta, Council for Religious Opinion and Tajdid, Focus Group Discussion, and the 2022 National Work Meeting Report have lower coverage, their contributions remain relevant in providing diverse perspectives on opportunities and innovations in DSBWM.

6.3.5.1 Digitalisation in Waqf Management

The opportunities in waqf digitalisation are enormous, especially with financial technology (fintech) and blockchain, which can increase efficiency and transparency in waqf financing schemes. Fintech enables easier and faster waqf transactions, while blockchain offers a secure and non-manipulated recording system. In addition, digital crowdfunding through platforms such as Waqfmu can expand access to donations from the community so that participation in waqf becomes more inclusive. The Muhammadiyah waqf management information system, such as SIMAM, is an innovation enabling more transparent and accountable waqf asset management. In addition, Internet of Things (IoT) technology can unite waqf assets in real-time, such as land and buildings, by installing sensors that send data periodically to ensure the security and optimisation of their use.

“The Council for Waqf Utilisation views fintech and blockchain as opportunities to strengthen the financing scheme for productive waqf.....” (Informant #1: Council for Waqf Utilisation of the Central Board of Muhammadiyah)

“The latest technological innovations include developing crowdfunding systems, Waqfmu and plans to improve SIMAM for easier use and access.” (Informant #2: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Jakarta)

“The most relevant technology for waqf management today is fintech, particularly financial technology, which involves sharia-compliant peer-to-peer lending. Additionally, Internet of Things (IoT) technology monitors the status of waqf assets remotely.” (Informant #5: Technology Expert in Muhammadiyah Organisation)

“Technology strengthens transparency through audit trails, which record every change in transactions.” (Informant #5: Technology Expert in Muhammadiyah Organisation)

6.3.5.2 Innovation of Waqf Financing Scheme

New financing schemes such as Cash Waqf Linked Sukuk (CWLS) and Cash Waqf Linked Deposits (CWLD) have been developed as innovative Islamic financial instruments to increase waqf productivity. This financing model allows waqf funds to be invested in profitable financial instruments so that the results can be used to support social projects. In addition, using cash waqf is a great opportunity because it provides flexibility for the community in waqf without having to own physical assets such as land or buildings. Strategic partnerships with Islamic banks, entrepreneurs, and Muhammadiyah business units are important innovations in optimising waqf assets through business investment and developing productive sectors such as waqf-based agriculture. In addition, new concepts such as waqf shares, waqf insurance, productive land waqf, and productive capital waqf show innovation in the diversification of waqf financial instruments, which can increase the sustainability of the waqf-based economy.

“The Waqf Management Council (Majelis Pendayagunaan Wakaf PP Muhammadiyah) continues to innovate financing schemes for productive waqf, including Cash Waqf Linked Sukuk (CWLS) and Cash Waqf Linked Deposits (CWLD).” (Informant #1: Council for Waqf Utilisation of the Central Board of Muhammadiyah)

“.....; second, the policy on programs that utilise information technology (IT) to leverage multi-platform IT systems to reach all sectors; third, a financing policy focusing on waqf money and cash-based waqf.” (Informant #1: Council for Waqf Utilisation of the Central Board of Muhammadiyah)

“Partnering with external parties like Islamic banks, entrepreneurs, and Muhammadiyah's enterprises to maximise waqf assets.” (Informant #3: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Yogyakarta)

“Through the digitalisation of waqf, digital technology is integrated into traditional waqf practices and systems. Various technologies, such as blockchain, crowdfunding, smart waqf apps, and data analysis, improve efficiency, transparency, and accessibility in waqf management and fund distribution.” (Informant #6: Council for Economy, Business, and Tourism of the Central Board of Muhammadiyah)

6.3.5.3 Human Resource Development and Technology Literacy

Another big opportunity is developing competent human resources (HR) in digital waqf management. Recruiting young HR is a key strategy in accelerating digital transformation because they are more adaptive to technological developments and modern financial systems. In addition, increasing digital literacy among waqf managers is crucial to implementing technologies such as fintech, blockchain, and digital management systems optimally. Muhammadiyah has collaborated with BWI and BNSP to provide training and certification for waqf Nazirs throughout Indonesia to ensure that waqf managers have competencies that follow modern governance standards. Developing a digital education platform is also an innovation that can help waqf managers understand the latest regulations and technology and optimise their role in managing waqf assets more effectively and professionally.

“DKI Jakarta recruits younger human resources to accelerate digital transformation and increase technological literacy among waqf managers.” (Informant #2: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Jakarta)

“Regular training and Nazir certification improve competence. Muhammadiyah collaborates with BWI and BNSP to provide this training to waqf managers across Indonesia.” (Informant #3: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Yogyakarta)

“Technology plays a crucial role through SIMAM in managing waqf assets more efficiently. However, the implementation of SIMAM is still limited due to incomplete data and a lack of competent HR across regions.” (Focus Group Discussion)

6.3.5.4 Transparency and Accountability in Waqf

Technology plays a strategic role in increasing transparency and accountability in waqf management. This opportunity can be utilised through digital audits and technology-based reporting, where every transaction and use of waqf assets can be recorded transparently and easily accessible to the public. Digitalisation of financial reports also allows the public to monitor the development of waqf funds in real time, thereby

increasing trust in waqf management institutions. Implementing a digital audit trail is an important innovation in recording all waqf transactions accurately, ensuring no misuse of funds or assets. In addition, using social media and digital platforms to publish waqf financial reports can expand the reach of information to the public, increase public participation, and strengthen the accountability of waqf management. With a management information system such as SIMAM, waqf asset management can be carried out more transparently throughout the region, thereby reducing the risk of disputes or misuse of assets.

“The public response has been very positive. With technology like SIMAM, people can easily access information about how their waqf assets are being used, and waqf management transparency has improved.” (Informant #3: Council for Waqf Utilisation of the Provincial Board of Muhammadiyah in Yogyakarta)

“Yes, it is, and it is very helpful. For example, waqf organisation financial reports can be published for the public through digitisation, such as on social media, especially for cash waqf or projects like mosque construction.” (Informant #4: Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah)

“Technology strengthens transparency through audit trails, which record every change in transactions. With technology, each step in waqf management can be recorded and monitored, allowing clear accountability for who did what and when.” (Informant #5: Technology Expert in Muhammadiyah Organisation)

6.3.6 Theme 6: Suggestion to Adopt the DSB WM

Effective waqf management requires a structured strategy, especially when dealing with administrative and transparency challenges. In the digital era, using technology such as the Digital Social Business for Waqf Management (DSB WM) is a potential solution to simplify the Waqf Management process. However, adopting this technology in the Muhammadiyah environment, especially by IT Experts (Informant #5), still requires a more comprehensive approach. Based on interviews, several key factors influence the acceptance of this technology, such as understanding the waqf management process,

awareness campaigns, need-based training programs, and collaboration with external experts.

“Effective strategies begin by understanding the processes involved in waqf management and demonstrating how technology simplifies these processes. Additionally, a continuous awareness campaign is needed to highlight the benefits of technology for waqf managers. It is essential to showcase how technology can ease the waqf process end-to-end.”

“A training program should start with a precise analysis of needs and objectives. The program design should be interactive and relevant to participants' needs. The training material should be well-prepared, and the schedule should be flexible, allowing for online and offline sessions. Continuous evaluation is crucial to ensure the program's effectiveness. Lastly, collaboration with external experts is essential”

The following analysis will discuss how these factors can drive the more effective adoption of DSB WM in Muhammadiyah:

i. **Understanding the Waqf Management Process and the Role of Technology**

The interview emphasised that an effective strategy begins with understanding the Waqf Management Process. This emphasises that adopting the Digital Social Business for Waqf Management (DSB WM) (DSB WM) must begin with in-depth education on how this system can simplify waqf administration and management. If Muhammadiyah IT Experts understand the conventional waqf management workflow, they will more easily see the advantages of technology in accelerating the process, increasing accuracy, and transparency.

ii. **Continuous Awareness Campaign**

The success of technology adoption in the Waqf depends not only on the provision of the system but also on the users' awareness and readiness. Therefore, it is necessary to carry out a continuous campaign to introduce the benefits of DSB WM to Waqf managers. This campaign can be carried

out through seminars, workshops, digital publications, and discussions with Muhammadiyah stakeholders.

iii. **Needs-Based Training Program**

Interview statements highlight the importance of training design based on needs and objectives. In the context of DSB WM adoption, training should focus on:

- a. Needs analysis: Determining which aspects are challenging in waqf management and how technology can address them.
- b. Interactive materials: IT Experts must gain hands-on experience using DSB WM so that they not only understand the theory but can also implement it practically.
- c. Flexible schedule: Training can be conducted online and offline to accommodate participants' busy schedules.
- d. Continuous evaluation: To measure training effectiveness and ensure that IT Experts can master the system optimally.

iv. **Collaboration with External Experts**

The interview also emphasised the importance of collaboration with external experts. In this context, Muhammadiyah can collaborate with academics, system developers, and Islamic financial technology practitioners to ensure that the implementation of DSB WM runs according to the best standards. This collaboration can also assist in system updates and resolving technical obstacles that may be encountered.

The vivo results of 6.21% show that the adoption of DSB WM by Muhammadiyah IT Expert is still in the early stages and not yet fully optimal. Therefore, a more proactive strategy is needed, such as a deep understanding of waqf management, consistent awareness campaigns, needs-based training, and collaboration with external parties. By implementing this approach, it is hoped that the adoption of DSB WM can significantly increase the management of the Muhammadiyah waqf.

6.4 DISCUSSION

Muhammadiyah can improve the effectiveness of waqf management through digital technology and social business models, creating wider economic opportunities for the community. By adopting the Digital Social Business for Waqf Management (DSB-WM) model, Muhammadiyah can expand its reach and social impact, building a more transparent, efficient, and sustainable waqf system. However, the success of this waqf digitalisation is highly dependent on strong legitimacy, as explained by Suchman (1995), which includes three main dimensions: normative, cognitive, and regulative. Normative legitimacy ensures that digital waqf management remains under shariah values and Islamic ethics, while cognitive legitimacy focuses on the community's understanding and acceptance of this innovation. On the other hand, regulative legitimacy emphasises compliance with government regulations and Muhammadiyah's internal policies to ensure the sustainability and validity of the technology-based waqf system.

NVivo analysis shows that legitimacy is a key factor in Muhammadiyah's waqf digitalisation, with regulatory support, transaction transparency, and active participation of stakeholders such as the Council for Religious Opinion and Tajdid, the Council for Waqf Utilisation, and technology experts. In addition, integrating social business models in Waqf strengthens accountability and increases economic benefits for the community. DSB-WM is expected to contribute significantly to Islamic economics and social welfare with innovations that continue to develop. Through a legitimacy-based approach, Muhammadiyah can ensure that digital transformation in waqf is legally sharia-compliant and widely accepted by the community, thus becoming a strategic instrument in sustainable social development.

The integrated waqf technology management model with social business suitable for Muhammadiyah must be designed comprehensively to optimise the waqf's potential to create significant social and economic impacts. This model can include three main dimensions: technology integration, social business-based management, financial sustainability, and key elements, namely Waqf Literacy, Training and Capacity Building, and Collaboration.

i. Technology Integration

Technology is crucial in transforming digital waqf management, especially in increasing efficiency, transparency, and accountability. Muhammadiyah has developed the Muhammadiyah Waqf Management Information System (SIMAM) as a solution for the digital recording of waqf assets. This system allows real-time asset monitoring and is integrated with the Geographic Information System (GIS) for more accurate mapping. In addition, the WaqfMu platform is a digital waqf crowdfunding innovation that facilitates the collection and distribution of waqf funds more transparently and efficiently. Muhammadiyah applies an approach that combines centralisation and decentralisation. At the central level, SIMAM ensures uniform data management and reporting standards, supports operational efficiency and increases accuracy in recording waqf assets. Meanwhile, at the regional level, each Social Enterprise Muhammadiyah (AUM) can adjust the technology system according to its needs and capacity. This balance between centralised administration and regional flexibility creates more effective waqf governance. With a digital platform, the community can participate in waqf more efficiently, including through practical and fast online donations. This technology integration increases efficiency in managing waqf assets and ensures high accountability at all levels of the Muhammadiyah organisation, from the centre to the regions.

ii. Social Business Integration

Muhammadiyah manages waqf productively by utilising waqf assets to fund various social and economic projects that have social and economic impacts (Dees, 1998; Yunus, 2010), such as the development of educational infrastructure, health services, community-based economic empowerment, and the agricultural sector. This approach optimises the potential of waqf in supporting sustainable development by integrating the Social Business model, which combines economic, social, and religious principles for broader benefits. One of its implementations is through the Social Enterprise Muhammadiyah (AUM), which covers various sectors, including waqf-

based educational institutions supported by business units such as printing and lodging. The profits generated are reused for social programs, such as education scholarships, free health services, and economic empowerment. In addition, Muhammadiyah also developed the Muhammadiyah Business Centre in Kulon Progo and the Gunung Sindur Sports Centre, which utilise waqf assets to improve the welfare of the local community. However, in practice, the main challenges in integrating Social Business with digital waqf are the persistence of a traditional mindset in waqf management and limited managerial capacity in managing assets professionally. Therefore, this approach requires support from digital technology, transparent regulations, and synergy with the Islamic business and finance sectors to be more optimal and sustainable. With the right strategy, Muhammadiyah can maximise the benefits of waqf as a dynamic, innovative, and effective Islamic economic instrument for inclusive social development.

iii. Financial sustainability

Financial sustainability is key to supporting Muhammadiyah's productive waqf management model. Therefore, Muhammadiyah needs a strong financial ecosystem to ensure the continuity of charitable activities and maintain its existence in the long term. With more than 112 years of experience in the socio-business approach, Muhammadiyah has proven its resilience in managing waqf productively. However, new challenges, such as the development of digital technology and modern funding schemes, require more innovative diversification of financing sources. In line with the findings in the NVivo analysis, Muhammadiyah has begun to adopt various modern financial instruments, such as Cash Waqf Linked Sukuk (CWLS) and Cash Waqf Linked Deposits (CWLD) and utilise crowdfunding-based digital platforms to increase community participation. In addition, digitalisation in waqf management, including implementing SIMAM (Muhammadiyah Asset Management Information System), allows for transparent and real-time recording and monitoring of waqf assets. However, the challenges faced are not small. The limited human resources competent in digital technology, high implementation costs, and low literacy of waqf in the community are the

main obstacles to optimising the potential of waqf digitalisation. Therefore, Muhammadiyah must strengthen coordination between institutions, improve digital literacy for waqf managers, and develop waqf-based social business strategies to create broader social and economic impacts. With an adaptive and innovative approach, Muhammadiyah can continue to be a pioneer in sustainable, productive waqf management.

Three key elements, Waqf Literacy, Training, Capacity Building, and Collaboration, are important in ensuring the effectiveness of implementing Digital Social Business for Waqf Management (DSB-WM) in Muhammadiyah. Based on the findings, various challenges and opportunities in managing digital waqf can be analysed using relevant theories to strengthen its development strategy.

- i. **Waqf Literacy** is a significant factor in increasing community participation in the digital waqf scheme. The research findings show that the main obstacles in optimising waqf are the lack of community understanding of cash waqf digitalisation and waqf financing schemes such as Cash Waqf Linked Sukuk (CWLS). Therefore, the diffusion of innovation (DOI) theory proposed by Rogers (2003) is relevant in explaining how digital waqf literacy can spread among the community and stakeholders. DOI highlights factors such as community awareness, accessibility of information, and the effectiveness of educational campaigns as key determinants in accelerating the adoption of digital waqf technology. In the context of Muhammadiyah, efforts such as using social media, integrating crowdfunding platforms such as WaqfMu, and public education through seminars and webinars are important steps in increasing literacy and public awareness of digital waqf.
- ii. **Training and Capacity Building** are crucial elements in ensuring the readiness of human resources (HR) to manage digital waqf (Shaikh et al., 2017b). The findings show that one of the main obstacles to waqf digitalisation in Muhammadiyah is the lack of competent HR in using digital technology and waqf management. Many nazhirs still use traditional methods in recording and managing waqf, so systems such as the Muhammadiyah Asset Management Information System (SIMAM) have not

been fully optimised. The Human Capital Theory put forward by Becker (1964) explains that increasing HR skills and capacity through training, certification, and technology education can increase the efficiency of waqf management. Muhammadiyah has attempted to overcome this challenge by collaborating with the Indonesian Waqf Board (BWI) and the National Professional Certification Agency (BNSP) to provide training and certification for waqf nazirs. However, the scope of this training still needs to be expanded and made more systematic so that all waqf managers can master digital technology optimally. In addition, recruiting a younger generation more adaptive to technology is an important strategy in accelerating the digital transformation of Muhammadiyah's waqf.

iii. **Collaboration** is key to strengthening Muhammadiyah's digital waqf system. The findings show that Muhammadiyah has collaborated with various stakeholders, both internal and external, to optimise the management of digital waqf. Internally, the Council for Waqf Utilisation (MPW), the Council for Economy, Business, and Tourism (MEBP), the Council for Higher Education, Research, and Development (DIKTI LITBANG), and the Council for Elementary, Secondary, and Non-formal Education (DIKDASMEN) work together to formulate waqf management strategies based on sharia and technology. Externally, Muhammadiyah has partnered with shariah banks, fintech startups, and academics to develop more innovative waqf financing models, including using blockchain, crowdfunding, and smart waqf apps to increase transparency and efficiency in waqf asset management. The Stakeholder Theory proposed by Freeman (1984) is relevant in explaining the importance of collaboration between various parties to ensure the sustainability and success of digital-based waqf. With a collaboration-based approach, Muhammadiyah can ensure that digital waqf is managed transparently and efficiently and has a broader social and economic impact on the community.

By integrating these elements, Muhammadiyah can create a waqf management model that is not only based on shariah principles but also modern, inclusive, and sustainable. This model will provide social and economic benefits to the broader

community while strengthening Muhammadiyah's role as an innovation pioneer in waqf management in Indonesia.

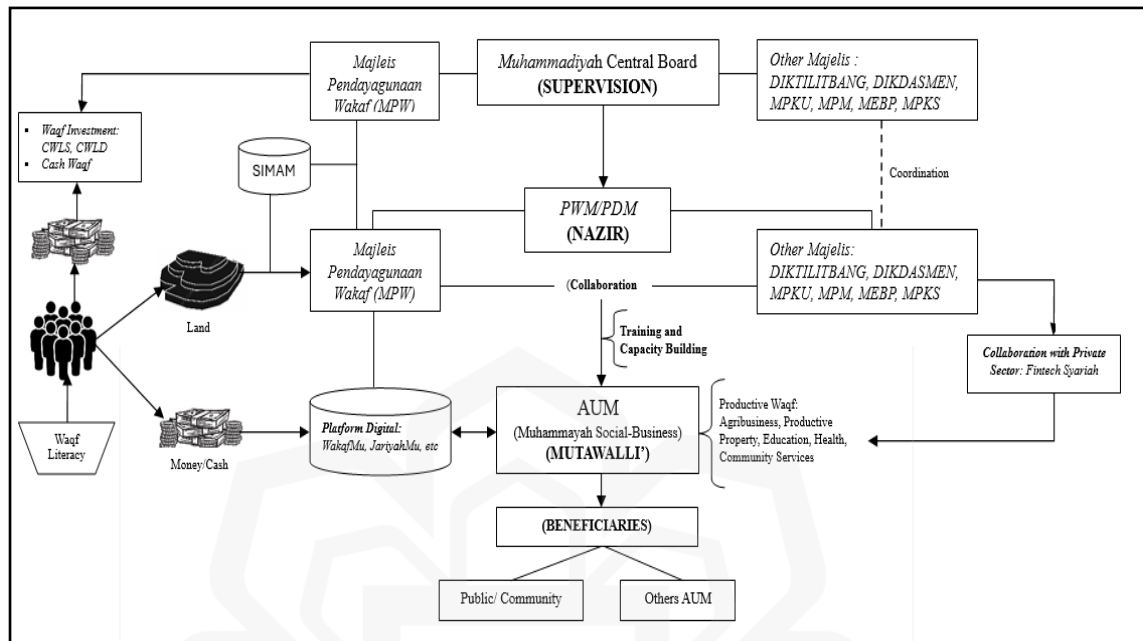


Figure 6.4 The Muhammadiyah's Digital Socio-Business Waqf Model

In Muhammadiyah's Digital Socio-Business Waqf Model, five main components form the workflow: **input, process, output, control, and constraint**. This system is designed to manage waqf productively and provide widespread benefits to society.

- i. **Input:** The system begins with the collection of various resources. One of the key initiatives is **waqf literacy**, which involves educating the public to raise awareness about the importance of waqf. The primary sources of funds in this system come from **waqf investments**, such as **Cash Waqf Linked Sukuk (CWLS)**, **Cash Waqf Linked Deposit (CWLD)**, and **cash waqf**, which may be in the form of money (via a digital platform such as WakafMu, JariahMu, and so on) or assets such as land. These waqf assets are then managed by relevant institutions and utilised in various productive activities.
- ii. **Process:** After receiving waqf from the public, the **Majelis Pendayagunaan Wakaf (MPW)** is responsible for managing and distributing the waqf assets.

To ensure effective management, the system utilises the **Waqf Management Information System (SIMAM)**, a system that records, monitors, and manages waqf data transparently. Subsequently, **PWM/PDM (Nazir)** acts as the primary administrator, ensuring that waqf funds are optimally utilised according to shariah principles and social objectives. The system also incorporates **collaboration with various stakeholders**, including other Muhammadiyah councils and private sector entities such as **Islamic Fintech**, to enhance transparency and drive innovation in waqf management. Additionally, **training and capacity-building** initiatives are conducted to equip waqf managers with the necessary skills to manage waqf assets more effectively.

- iii. **Output:** The outcome of this management process is the establishment of **AUM (Muhammadiyah Social-Business/ MUTAWALLI')**, a Muhammadiyah social enterprise that manages waqf productively. The waqf funds are then allocated to support **productive waqf initiatives**, including **agribusiness, productive property, education, healthcare, and community services**. Through AUM, the benefits of waqf are extended to a broader audience, including both the public and other Muhammadiyah business units, who serve as the **beneficiaries** of this system.
- iv. **Control:** To ensure that this system operates effectively and aligns with its objectives, the **Muhammadiyah Central Board** serves as the main supervisory body for waqf management. Furthermore, coordination is maintained with various **Muhammadiyah councils**, such as **DIKTILITBANG, DIKDASMEN, MPKU, MPM, MEBP, and MPKS**, which help oversee and ensure that waqf funds are managed transparently and efficiently. This oversight is crucial in maintaining the sustainability of the system and enhancing public trust in waqf management.
- v. **Constraint:** Despite its well-structured design, this waqf management system faces several challenges that can affect its effectiveness. One of the primary constraints is the **limited availability of skilled human resources (HR)** who have a deep understanding of waqf management. Additionally,

many administrators and members of society still hold **traditional mindsets**, perceiving waqf solely as a static asset, such as land for mosques or schools, which hinders innovation in productive waqf utilisation. From a technological perspective, the system also encounters **technology and infrastructure limitations**, which create barriers to the digitalisation of waqf management. The adoption of digital systems is often challenged by **high technology implementation costs**, making it difficult for many waqf management institutions to integrate advanced digital solutions. Another significant challenge is **low waqf literacy in society**, as many people are still unaware of the concept of productive waqf and its long-term benefits. This lack of awareness results in relatively low participation in waqf contributions. Furthermore, there is **a lack of coordination and collaboration among stakeholders**, both within Muhammadiyah and with external entities such as the government and private sector. This lack of synergy hinders the optimal and integrated management of waqf.

To overcome the challenges in Muhammadiyah's waqf management, several key strategies are needed. The first step is to understand the waqf management process and the role of technology in improving efficiency. The implementation of **Digital Social Business for Waqf Management (DSB WM)** should begin with in-depth education so that Muhammadiyah's IT experts can fully grasp its benefits in accelerating processes, increasing accuracy, and ensuring transparency. Additionally, a continuous awareness campaign should be conducted through seminars, workshops, digital publications, and discussions with stakeholders to better prepare waqf managers for technology adoption.

Furthermore, a needs-based training program is essential, focusing on identifying challenges, providing interactive materials, offering flexible schedules, and conducting ongoing evaluations to ensure participants can effectively apply technology in waqf management. Collaboration with academics, system developers, and Islamic financial technology practitioners is also crucial to ensuring that **DSB WM** implementation meets the highest standards. This collaboration can assist in system updates and troubleshooting technical issues. By implementing these strategies, Muhammadiyah's waqf management can become more modern, efficient, and beneficial to society.

6.5 SUMMARY

This chapter aims to achieve RO 2, determine significant factors that influence the construction of the Muhammadiyah social business waqf model in the era of digital assets. A qualitative NVivo analysis identified all themes as factors influencing the digital waqf management in Muhammadiyah, including legitimacy, technology, social business integration, challenges and barriers, opportunities and innovations, and strategies. The concept of Digital Social Business for Waqf Management (DSB-WM) and stakeholder perceptions built the Muhammadiyah social-business waqf model in the digital era. Integrating technology, such as the Muhammadiyah Waqf Management Information System (SIMAM) and the WaqfMu platform, increases transparency, efficiency, and community participation. The success of this digitalisation depends on normative legitimacy (shariah compliance), cognitive (community acceptance), and regulatory (policy conformity). In addition, the social business model in the Waqf allows for the productive use of assets for education, health services, and economic empowerment. However, it still faces challenges of traditional mindsets and limited managerial capacity.

Financial sustainability is a significant factor in the adoption of instruments such as Cash Waqf Linked Sukuk (CWLS) and digital crowdfunding. The success of DSB-WM is supported by three key elements: waqf literacy, increasing the capacity of managers, and collaboration with various parties. With a legitimacy-based approach and technology integration, Muhammadiyah can build a modern, inclusive, and sustainable waqf system, strengthening its role as a pioneer of waqf innovation in Indonesia.

CHAPTER SEVEN

FACTORS INFLUENCE THE MUHAMMADIYAH DIGITAL SOCIO-BUSINESS WAQF MODEL

7.1 INTRODUCTION

This chapter discusses the factors influencing the Muhammadiyah Socio-Business Digital Waqf Model adoption. This strategic innovation combines digital technology with social and business principles to optimise sustainable waqf management. This model aims to maximise the waqf's potential in supporting the community's economic development through an efficient, transparent, and inclusive digital platform. By utilising technological developments, waqf digitalisation is expected to overcome the challenges of conventional waqf management, such as low waqf literacy in the community, limited access to information, and a lack of transparency in managing waqf funds.

However, the success of implementing this model cannot be separated from various factors that influence its adoption rate. These factors include technological readiness, which includes public perceptions of ease of use and relative benefits of digital platforms; social support, including public views on the digitalisation of waqf management and religious values; organisational capacity, such as the readiness of Muhammadiyah institutions to provide structural support; and external environmental support, including government policies and relevant digital technology developments.

In examining the adoption of the Muhammadiyah Socio-Business Digital Waqf Model, several theoretical lenses are employed to strengthen the analytical foundation of this study. The **Technology Acceptance Model (TAM)** (Davis, 1989) provides a framework to explain how perceptions of usefulness and ease of use influence stakeholders' willingness to adopt digital waqf platforms. This is particularly relevant as the transition from conventional to digital waqf management requires overcoming technological barriers and ensuring users' confidence in the system. Complementing this, the **Theory of Planned Behaviour (TPB)** (Ajzen, 1991) emphasises the role of

attitudes, subjective norms, and perceived behavioural control in shaping intention to use the digital waqf model. In the Muhammadiyah context, this reflects how individual beliefs, community expectations, and perceived institutional support affect adoption.

To address the institutional and societal dimension, the study also employs **Legitimacy Theory** (Suchman, 1995), which asserts that organisations must align their actions with the wider society's values, norms, and beliefs to gain acceptance. The legitimacy perspective is essential because the success of Muhammadiyah's digital waqf initiative depends on technical efficiency, gaining societal trust, ensuring shariah compliance, and maintaining alignment with Islamic principles and community expectations.

Moreover, the **Social Business Theory** (Yunus, 2007) is integrated to conceptualise the socio-business orientation of Muhammadiyah's digital waqf model. Social business is a form of enterprise that prioritises solving social problems while maintaining financial sustainability. In this framework, the digital waqf model is not solely a charitable initiative but also a structured socio-economic mechanism that reinvests surpluses into expanding social benefits. This aligns with Muhammadiyah's historical mission of advancing education, healthcare, and economic empowerment through waqf-based institutions, thereby ensuring that waqf management combines social and business logics sustainably.

This study adopted the Structural Equation Modelling - Partial Least Squares (SEM PLS) method to analyse the relationship between these factors. This approach allows researchers to evaluate the complex relationship between independent variables (technological, social, organisational, and environmental factors), mediating variables such as technological legitimacy, and dependent variables in the form of the level of adoption of the Muhammadiyah Socio-Business Digital Waqf model. With this approach, the study not only explains the most influential factors but also provides strategic insights that can support the broader implementation of the model.

This chapter aims to identify the main factors influencing the adoption of this model, explain the relationship between factors based on the results of empirical analysis, and provide strategic recommendations to accelerate public acceptance of

waqf digitalisation. By deepening its understanding of these factors, Muhammadiyah is expected to increase the effectiveness of the digital waqf model, expand its impact, and support the sustainable economic development of the community:

7.2 BACKGROUND OF QUANTITATIVE RESPONDENTS

This study used purposive sampling, selecting respondents from Muhammadiyah Social Enterprise (AUM) managers and organisational administrators directly involved in waqf management. The sampling approach ensures that the collected data focuses on managerial, strategic, and operational aspects of waqf governance within Muhammadiyah. Respondents in this study were Muhammadiyah members across Java Island, representing diverse backgrounds and responsibilities in waqf administration. 81 respondents participated, reflecting the complexity of waqf management and increasing technology integration to enhance its efficiency and effectiveness.

From the demographic distribution (Table 7.1), most respondents were aged 40–50 years (30.9%) and above 50 years (30.9%), indicating the dominance of senior figures in waqf management. Meanwhile, the 20–30 age group only accounted for 8.6%, suggesting low involvement of younger generations. Regarding education, most respondents held a Master's degree (58.1%), followed by a Bachelor's degree (25.9%), while only 8.6% were high school/diploma graduates. This indicates that individuals predominantly lead waqf management in Muhammadiyah with high academic qualifications, which may influence decision-making and policy formulation. Regarding organisational positions, 50.6% of respondents were from AUM and directly involved in waqf asset management. The rest were distributed across PWM (14.8%), PDM (9.9%), PCM (11.1%), and PRM (13.6%), reflecting an organised and hierarchical management structure.

Table 7.1 Distribution of Respondent

Demographics	Characteristic	Frequency	Percentage%
Age Group	20 – 30	8	8,60%
	30 – 40	24	29,60%
	40 – 50	25	30,90%
	> 50	25	30,90%
		81	100,00%
Education	High School/Diploma	7	8,60%
	Bachelor	21	25,90%
	Master	47	58,10%
	PhD	6	7,40%
		81	100%
Position	Provincial Board of Muhammadiyah (PWM)	12	14,80%
	Regency Board of Muhammadiyah (PDM)	8	9,90%
	Branch Board of Muhammadiyah (PCM)	9	11,10%
	Sub-branch Board of Muhammadiyah (PRM)	11	13,60%
	Muhammadiyah Social Enterprise (AUM)	41	50,60%
		81	100%

Muhammadiyah implements a structured and tiered waqf management system, with clearly defined roles at each organisational level. The Provincial Board of Muhammadiyah (PWM) is responsible for formulating strategic waqf policies, ensuring long-term asset sustainability, and providing technical training for managers. The Regency Board of Muhammadiyah (PDM) oversees waqf management at the district/city level, ensuring compliance with organisational policies, evaluating performance, and reporting results to PWM. The Branch Board of Muhammadiyah (PCM) focuses on community-based waqf initiatives, collaborating with PRM and AUM to optimise waqf assets for local benefit. The Subbranch Board of Muhammadiyah (PRM) handles village-level waqf operations, supporting PCM in identifying new waqf opportunities and raising community awareness about the importance of waqf. Muhammadiyah Social Enterprise (AUM) is the primary executor, utilising waqf assets to support social, educational, health, and economic programs while ensuring financial transparency and innovation to maximise waqf benefits.

The sample findings indicate that the dominance of senior figures in waqf management may pose a challenge to digital transformation, given that only 8.6% of respondents were from the younger generation. This suggests a potential gap in digital

literacy and the organisation's readiness to adopt technology-driven waqf management solutions. To address this, Muhammadiyah should encourage youth participation in waqf administration through digital training programs, capacity-building initiatives, and the development of technology-based waqf management systems.

Muhammadiyah's waqf management system demonstrates a well-structured, accountable, and sustainable approach. The dominance of highly educated leadership provides a strong foundation for effective governance. However, strategies must be implemented to bridge the generational gap and promote technology adoption in waqf management to enhance efficiency through digitalisation. With transparent, collaborative, and technology-driven governance, Muhammadiyah's waqf assets hold significant potential to deliver sustainable social and economic benefits to the community.

7.3 FINDING AND ANALYSIS

This study employs the Partial Least Squares-Structural Equation Modelling (PLS-SEM) approach as the primary analytical method. PLS-SEM is a variance-based structural equation modelling technique suitable for studies with small sample sizes, complex models, and non-normally distributed data (Hair et al., 2017). One of its key advantages over Covariance-Based SEM (CB-SEM) is its flexibility, as it does not require the assumption of multivariate normal distribution and can be used to both explore and confirm relationships between latent variables (Sarstedt et al., 2019). Additionally, PLS-SEM enables more stable parameter estimation through the bootstrapping technique, ensuring valid results even with a limited sample size (Preacher & Hayes, 2008). Therefore, this method is selected to analyse causal relationships within the research model.

The research model consists of eight latent variables, namely Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Subjective Norms (SN), Perceived Behavioural Control (PBC), Technology Legitimacy (TL), Intention to Use (IU), Actual Use of Technology (AUT), and Social-Business Integration (SBI). The model includes four independent variables, one mediating variable, and three dependent variables, with

each latent variable comprising six indicators. Given the complexity of these interrelationships, an analytical method capable of handling intricate causal connections, such as PLS-SEM, is required.

To determine the adequacy of the sample size in PLS-SEM, this study adopts two main approaches: the 10-times rule (Hair et al., 2017) and the Minimum R-squared method. According to the 10-times rule, the minimum required sample size should be 10 times the largest number of indicators per construct or 10 times the highest number of structural paths leading to a single construct. Since the largest number of indicators per latent variable in this study is six, the minimum recommended sample size is $10 \times 6 = 60$. Meanwhile, the Minimum R-squared method considers the significance level (5%), R-squared (R^2) value, and the number of constructs in the model. If the R^2 value in this model is moderate to high (≥ 0.25), then the 81 respondents used in this study are sufficient for PLS-SEM analysis. Based on these two approaches, the 81 respondents meet the minimum recommended threshold for PLS-SEM analysis. Therefore, this method can be effectively used to explore and confirm causal relationships within the complex research model. If needed, additional analyses, such as power analysis, can be conducted to further validate the adequacy of the sample size.

7.3.1 Validity and Reliability Test

Before continuing the research, the researcher first tested the research instruments. The instruments tested were 45 instruments consisting of 6 Perceived Usefulness instruments, 5 Perceived Ease of Use instruments, 6 Subjective Norms instruments, 5 Perceived Behavioural Control instruments, 6 Technology Legitimacy instruments, 5 *Intention to Use instruments*, 6 *Actual Use of Technology instruments*, and 6 Social-Business Integration instruments. In this study, the validity test was carried out using the Convergent Validity Test by looking at the Outer loading and Average Variance Extract (AVE), as well as the Discriminant Validity Test, where the discriminant validity test used the Fornell and Lacker Criterion, namely the square root of AVE. Based on the results of this study, convergent validity was tested by evaluating the loading factor and Average Variance Extracted (AVE) values. The results of this test are described as follows:

Table 7.2 Outer loading and Average Variance Extract (AVE)

	Original Sample (O)	Status
AUT1 <- Actual Use of Technology	0.878	Valid
AUT2 <- Actual Use of Technology	0.879	Valid
AUT3 <- Actual Use of Technology	0.869	Valid
AUT4 <- Actual Use of Technology	0.927	Valid
AUT5 <- Actual Use of Technology	0.891	Valid
AUT6 <- Actual Use of Technology	0.874	Valid
IU1 <- Intention to Use	0.835	Valid
IU2 <- Intention to Use	0.865	Valid
IU3 <- Intention to Use	0.861	Valid
IU4 <- Intention to Use	0.878	Valid
IU5 <- Intention to Use	0.918	Valid
PBC <- Perceived Behavioural Control	0.857	Valid
PBC2 <- Perceived Behavioural Control	0.827	Valid
PBC3 <- Perceived Behavioural Control	0.846	Valid
PBC4 <- Perceived Behavioural Control	0.873	Valid
PBC5 <- Perceived Behavioural Control	0.716	Valid
PEOU1 <- Perceived Ease of Use	0.829	Valid
PEOU2 <- Perceived Ease of Use	0.862	Valid
PEOU3 <- Perceived Ease of Use	0.882	Valid
PEOU4 <- Perceived Ease of Use	0.741	Valid
PEOU6 <- Perceived Ease of Use	0.731	Valid
PU1 <- Perceived Usefulness	0.836	Valid
PU2 <- Perceived Usefulness	0.867	Valid
PU3 <- Perceived Usefulness	0.776	Valid
PU4 <- Perceived Usefulness	0.898	Valid
PU5 <- Perceived Usefulness	0.863	Valid
PU6 <- Perceived Usefulness	0.793	Valid
SBI1 <- Social-Business Integration	0.923	Valid
SBI2 <- Social-Business Integration	0.889	Valid
SBI3 <- Social-Business Integration	0.901	Valid
SBI4 <- Social-Business Integration	0.878	Valid
SBI5 <- Social-Business Integration	0.899	Valid
SBI6 <- Social-Business Integration	0.793	Valid
SN1 <- Subjective Norms	0.719	Valid
SN2 <- Subjective Norms	0.728	Valid
SN3 <- Subjective Norms	0.822	Valid
SN4 <- Subjective Norms	0.833	Valid
SN5 <- Subjective Norms	0.743	Valid
SN6 <- Subjective Norms	0.833	Valid
TL1 <- Technology Legitimacy	0.854	Valid
TL2 <- Technology Legitimacy	0.863	Valid
TL3 <- Technology Legitimacy	0.845	Valid
TL4 <- Technology Legitimacy	0.926	Valid
TL5 <- Technology Legitimacy	0.865	Valid

An indicator is considered to meet the criteria of convergent validity well if the outer loading value is > 0.70 for each variable. Therefore, this study conducted additional tests to assess construct validity by looking at the Average Variance Extracted (AVE) value. The model is considered good if the AVE value for each construct is more significant than 0.7. From the test above, it can be concluded that all instruments for each variable studied are declared valid because the outer loading value is > 0.70 and the AVE value is > 0.7 .

Furthermore, the discriminant validity test used the Fornell and Larcker Criterion, which compares the Average Variance Extracted (AVE) square roots. The results of the discriminant validity test show the following values:

Table 7.3 Validity Test Results

	AUT	IU	PBC	PEU	PU	SBI	SN	TL
AUT	0.887							
IU	0.601	0.872						
PBC	0.788	0.559	0.826					
PEU	0.47	0.493	0.647	0.811				
PU	0.303	0.538	0.45	0.605	0.840			
SBI	0.598	0.664	0.666	0.617	0.493	0.881		
SN	0.555	0.596	0.641	0.585	0.516	0.759	0.781	
TL	0.631	0.716	0.686	0.583	0.484	0.708	0.73	0.871

Based on the Fornell-Larcker table criteria, the validity test in the table above is declared valid because the value of each variable indicator is greater than that of the other variables. Then, the researcher conducted an instrument reliability test using the Alpha Cronbach's method, using 35 instruments tested for the Alpha Cronbach's value. Here are the results:

Table 7.4 Alpha Value Test Cronbach's

	Cronbach's Alpha	Composite Reliability	Status
Actual Use of Technology	0.945	0.957	Reliable
Intention to Use	0.921	0.940	Reliable
Perceived Behavioural Control	0.882	0.914	Reliable
Perceived Ease of Use	0.868	0.905	Reliable
Perceived Usefulness	0.916	0.935	Reliable
Social Business Integration	0.942	0.954	Reliable
Subjective Norms	0.872	0.904	Reliable
Technology Legitimacy	0.920	0.940	Reliable

The alpha value test results, Cronbach's, in the table show the level of internal consistency of the various constructs or variables tested. The constructs tested show very good reliability because of Cronbach's alpha. Their alphas are all greater than 0.7, the minimum acceptable reliability limit. Composite Value Reliability (CR), which is also high for all constructs, indicates that these constructs are consistent and have good internal validity. Therefore, this measurement instrument can be considered reliable and used for further research related to technology adoption in Muhammadiyah organisations.

7.3.2 Structural Model Test

The inner Model (Ghozali Imam, 2006) is a structural model that aims to predict the causal relationship between latent variables and other unmeasured variables. This stage seeks to measure how independent variables affect dependent variables. The following are the results of testing the structural model:

Table 7.5 Structural Model Testing

	R Square	R Square Adjusted
Actual Use of Technology	0.650	0.626
Intention to Use	0.567	0.538
Social Business Integration	0.663	0.640
Technology Legitimacy	0.621	0.601

Table 7.5 shows the strength of the relationship between the independent and four dependent variables based on the R Square and R Square values. Adjusted. For the Actual Use of Technology, the independent variables can explain 65% of its variability, with the value slightly decreasing to 62.6% after adjustment, indicating quite good predictive power. In Intention to Use, the model explains 56.7% of the variability, but after adjustment, its predictive power becomes 53.8%, which is relatively weaker than other variables.

Furthermore, the Social-Business Integration variable shows the most substantial relationship with an R Square value of 66.3%, which drops slightly to 64% after adjustment, reflecting a perfect model in explaining social-business integration. Meanwhile, in Technology Legitimacy, the independent variable explains 62.1% of the variability, with an R Square value Adjusted by 60.1%. Overall, the model has a relatively strong predictive ability for all dependent variables, with the Social-Business Integration variable being the most dominant.

7.3.3 Hypothesis Testing

Path Analysis in Structural Equation Modelling (SEM) is a technique used to test causal relationships between interrelated variables. It is a more straightforward form of SEM that only involves the relationship between measured variables (observed) without explicitly considering latent variables (latent variables).

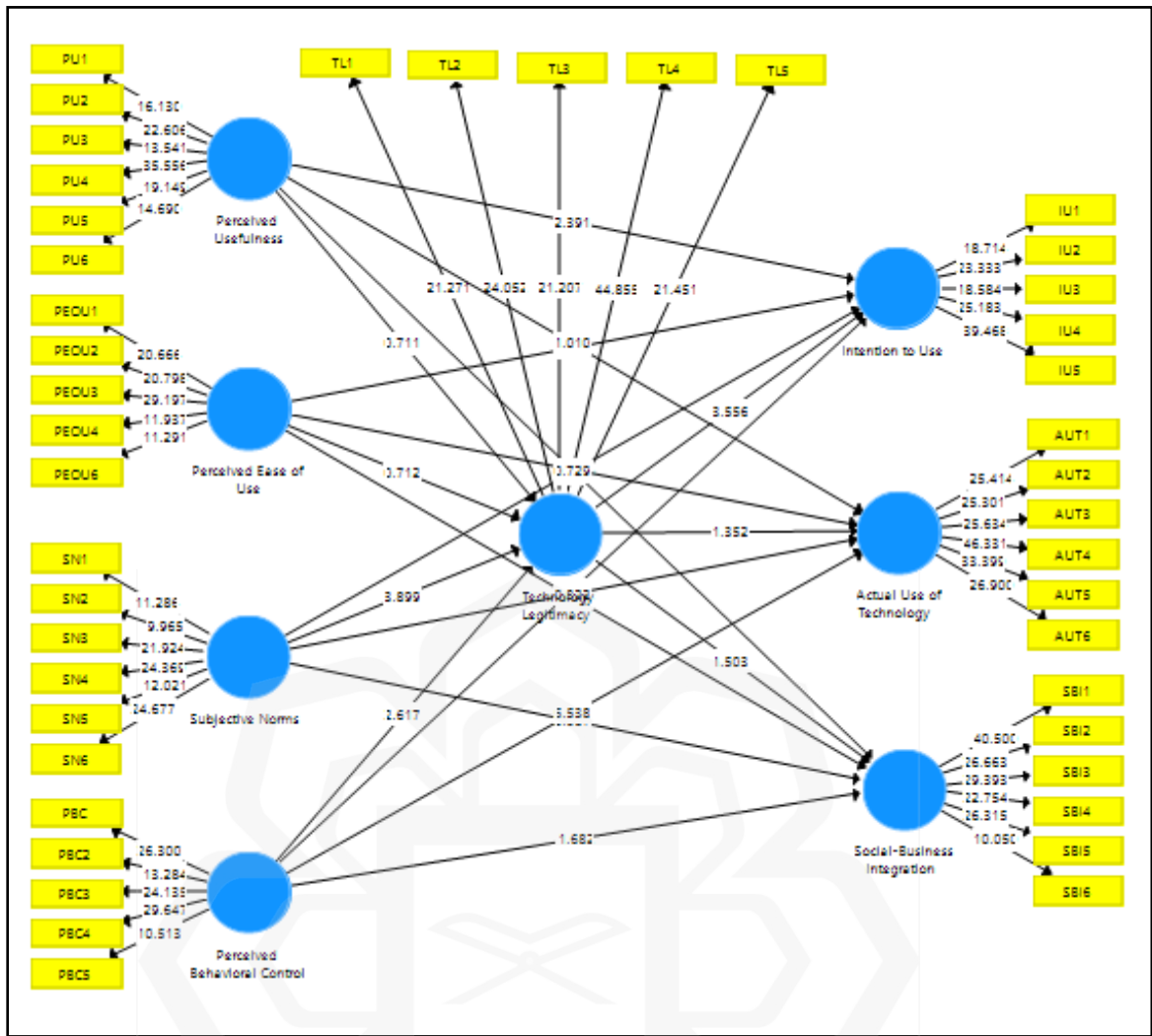


Figure 7.1 Path Analysis using Smart PLS

Hypothesis testing is used to describe the causal relationship between unidirectional variables. The requirement for the hypothesis to be accepted is to see the P value < 0.05 and the T statistic value > 1.96 (Ghozali Imam, 2006). The results of the hypothesis testing are presented in the following table:

Table 7.6 Hypothesis Testing

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
Perceived Behavioural Control -> Actual Use of Technology	0.717	0.13	5,538	0.000	Supported
Perceived Behavioural Control -> Intention to Use	0.08	0.117	0.682	0.496	Not Supported
Perceived Behavioural Control -> Social-Business Integration	0.16	0.095	1,682	0.093	Not Supported
Perceived Behavioural Control -> Technological Legitimacy	0.322	0.123	2.617	0.009	Supported
Perceived Ease of Use -> Actual Use of Technology	-0.08	0.11	0.729	0.466	Not Supported
Perceived Ease of Use -> Intention to Use	-0.051	0.144	0.356	0.722	Not Supported
Perceived Ease of Use -> Social-Business Integration	0.137	0.092	1,485	0.138	Not Supported
Perceived Ease of Use -> Technology Legitimacy	0.076	0.106	0.712	0.477	Not Supported
Perceived Usefulness -> Actual Use of Technology	-0.09	0.089	1,010	0.313	Not Supported
Perceived Usefulness -> Intention to Use	0.246	0.103	2,391	0.017	Supported
Perceived Usefulness -> Social-Business Integration	0.026	0.085	0.310	0.756	Not Supported
Perceived Usefulness -> Technology Legitimacy	0.062	0.088	0.711	0.477	Not Supported
Subjective Norms -> Actual Use of Technology	0.044	0.136	0.322	0.748	Not Supported
Subjective Norms -> Intention to Use	0.065	0.165	0.394	0.694	Not Supported
Subjective Norms -> Social-Business Integration	0.414	0.134	3,087	0.002	Supported
Subjective Norms -> Technological Legitimacy	0.446	0.114	3,899	0.000	Supported
Technology Legitimacy -> Actual Use of Technology	0.198	0.146	1,352	0.177	Not Supported
Technology Legitimacy -> Intention to Use	0.525	0.148	3,556	0.000	Supported
Technology Legitimacy -> Social-Business Integration	0.204	0.136	1,503	0.133	Not Supported

The results of hypothesis testing show that Perceived Behavioural Control (PBC) has a strong and significant positive effect on the Actual Use of Technology, with an original sample (β) of 0.717, a t-statistic of 5.538, and a p-value of 0.000, indicating strong support for the hypothesis. This finding suggests that individuals who perceive themselves as capable of controlling their behaviour are more likely to use technology in practice. On the other hand, PBC does not significantly influence the Intention to Use ($\beta = 0.08$, $t = 0.682$, $p = 0.496$) or Social-Business Integration ($\beta = 0.16$, $t = 1.682$, $p = 0.093$). This means that although individuals feel capable of using technology, this sense of control does not directly foster intention or social-business adoption. Interestingly, PBC shows a significant positive relationship with Technological Legitimacy ($\beta = 0.322$, $t = 2.617$, $p = 0.009$), indicating that greater behavioural control enhances the perception of technology as legitimate.

None of the paths tested for Perceived Ease of Use (PEOU) was statistically significant. Specifically, the effects on Actual Use of Technology ($\beta = -0.08$, $t = 0.729$, $p = 0.466$), Intention to Use ($\beta = -0.051$, $t = 0.356$, $p = 0.722$), Social-Business Integration ($\beta = 0.137$, $t = 1.485$, $p = 0.138$), and Technological Legitimacy ($\beta = 0.076$, $t = 0.712$, $p = 0.477$) were all not supported. These findings imply that the perceived simplicity or ease of using the system is not a determining factor in influencing usage behaviour, intention, or integration in the studied context. Meanwhile, Perceived Usefulness (PU) demonstrates mixed results. PU does not significantly affect Actual Use of Technology ($\beta = -0.09$, $t = 1.010$, $p = 0.313$), Social-Business Integration ($\beta = 0.026$, $t = 0.310$, $p = 0.756$), or Technological Legitimacy ($\beta = 0.062$, $t = 0.711$, $p = 0.477$). However, PU has a significant positive impact on the Intention to Use ($\beta = 0.246$, $t = 2.391$, $p = 0.017$), suggesting that individuals who perceive technology as beneficial are more motivated to adopt it, even if this does not immediately translate into actual usage or broader integration.

Concerning Subjective Norms (SN), the results reveal that SN does not have a significant effect on Actual Use of Technology ($\beta = 0.044$, $t = 0.322$, $p = 0.748$) or Intention to Use ($\beta = 0.065$, $t = 0.394$, $p = 0.694$). However, SN shows a strong and significant positive effect on Social-Business Integration ($\beta = 0.414$, $t = 3.087$, $p = 0.002$) and Technological Legitimacy ($\beta = 0.446$, $t = 3.899$, $p = 0.000$). These results highlight the critical role of social influence and community norms in shaping both the integration of technology into social-business contexts and the perceived legitimacy of technology within society. Finally, Technological Legitimacy (TL) also produces mixed findings. TL does not significantly affect Actual Use of Technology ($\beta = 0.198$, $t = 1.352$, $p = 0.177$) or Social-Business Integration ($\beta = 0.204$, $t = 1.503$, $p = 0.133$). Nonetheless, TL significantly influences Intention to Use ($\beta = 0.525$, $t = 3.556$, $p = 0.000$), confirming that when a technology is perceived as legitimate and widely accepted, individuals are more likely to intend to use it. This suggests that legitimacy is more crucial in shaping behavioural intention rather than direct usage or integration outcomes.

7.3.4 Indirect Hypothesis Testing

Indirect hypothesis testing through mediating variables is an important approach in research to understand the mechanisms that connect independent variables with dependent variables. In this approach, the mediating variable acts as a link that explains how and why the influence of one variable on another variable can occur. In the context of this study, the mediating variable tested is Technology Legitimacy (TL), which is expected to bridge the influence of factors such as Perceived Behavioural Control (PBC), Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Subjective Norms (SN), actual use of technology (AUT), intention to use technology (IU), and social-business integration (SBI). Using this approach, the study aims to identify the extent to which Technology Legitimacy (TL) can strengthen or mediate the relationship between these factors and the expected outcomes and provide a deeper understanding of the technology adoption process in social and business contexts.

Table 7.7 Intermediation Hypothesis Testing

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O /STDEV)	P Values	Decision
Perceived Behavioural Control -> Technology Legitimacy -> Actual Use of Technology	0.064	0.056	1.148	0.252	Not Supported
Perceived Ease of Use -> Technology Legitimacy -> Actual Use of Technology	0.015	0.027	0.561	0.575	Not Supported
Perceived Usefulness -> Technology Legitimacy -> Actual Use of Technology	0.012	0.022	0.564	0.573	Not Supported
Subjective Norms -> Technology Legitimacy -> Actual Use of Technology	0.088	0.07	1.263	0.207	Not Supported
Perceived Behavioural Control -> Technology Legitimacy -> Intention to Use	0.169	0.085	1.985	0.048	Supported
Perceived Ease of Use -> Technology Legitimacy -> Intention to Use	0.04	0.052	0.768	0.443	Not Supported
Perceived Usefulness -> Technology Legitimacy -> Intention to Use	0.033	0.048	0.676	0.500	Not Supported
Subjective Norms -> Technology Legitimacy -> Intention to Use	0.234	0.092	2.537	0.011	Supported
Perceived Behavioural Control -> Technology Legitimacy -> Social-Business Integration	0.066	0.054	1.221	0.223	Not Supported
Perceived Ease of Use -> Technology Legitimacy -> Social-Business Integration	0.015	0.026	0.593	0.553	Not Supported
Perceived Usefulness -> Technology Legitimacy -> Social-Business Integration	0.013	0.024	0.528	0.598	Not Supported
Subjective Norms -> Technology Legitimacy -> Social-Business Integration	0.091	0.067	1.363	0.174	Not Supported

The results of the indirect hypothesis testing reveal that Technology Legitimacy plays a partial mediating role within the proposed model. Specifically, the indirect paths from **Perceived Behavioural Control (PBC)** and **Subjective Norms (SN)** to **Intention**

to Use through Technology Legitimacy were found to be statistically significant ($\beta = 0.169$, $T = 1.985$, $p = 0.048$; $\beta = 0.234$, $T = 2.537$, $p = 0.011$, respectively). These findings suggest that individuals' perception of control over technological behaviour, as well as the influence of social expectations, significantly enhance their intention to adopt technology when mediated by Technology Legitimacy. Thus, the legitimization of technology strengthens the psychological and social drivers that shape the intention to use technology.

Conversely, the indirect effects of **Perceived Ease of Use (PEOU)** and **Perceived Usefulness (PU)** on **Intention to Use** through Technology Legitimacy were not significant (PEOU: $\beta = 0.040$, $T = 0.768$, $p = 0.443$; PU: $\beta = 0.033$, $T = 0.676$, $p = 0.500$). This indicates that, although ease of use and usefulness are central constructs in technology acceptance theories, they do not exert an indirect influence on intention when mediated by Technology Legitimacy within this context.

Similarly, none of the indirect effects leading to **Actual Use of Technology** were significant. Neither PBC, PEOU, PU, nor SN demonstrated a mediating relationship via Technology Legitimacy (all p-values > 0.05). This implies that Technology Legitimacy, while important for intention, does not directly translate into actual behavioural outcomes in the present model. A comparable pattern was observed in the relationship with **Social-Business Integration**, where none of the indirect pathways reached statistical significance (all p-values > 0.05).

These results highlight that Technology Legitimacy functions as a mediator only in the relationships between PBC and SN with Intention to Use. The findings underscore the importance of social and behavioural control factors over purely technological perceptions (ease of use and usefulness) in fostering intention, while suggesting that additional factors may be required to bridge the gap from intention to actual usage and integration into broader socio-business frameworks.

7.4 DISCUSSION

This section discusses the study's empirical results by addressing each hypothesis individually. The discussion is framed by relevant theoretical perspectives, previous studies, and recent scholarly developments, focusing on the Muhammadiyah context as a case of Islamic social enterprise and digital waqf innovation. The aim is to provide a nuanced and well-justified interpretation of the findings, highlighting both convergences and divergences with the extant literature.

7.4.1 Perceived Behavioural Control (PBC)

The analysis results show that Perceived Behavioural Control (PBC), which reflects how much a person feels capable of using technology, had significant and insignificant effects on the variables in the research model.

H1: Perceived Behavioural Control (PBC) → Actual Use of Technology (AUT)

The findings indicate that PBC has a positive and significant effect on Actual Use of Technology (AUT). This result reinforces the notion that when individuals feel confident in their ability to use technology, such perceptions of control translate into actual behavioural outcomes. This is consistent with the *Theory of Planned Behaviour* (Ajzen, 1991), which highlights PBC as a key determinant of actual behaviour, and with the UTAUT framework (Venkatesh et al., 2012), where *facilitating conditions* strongly influence usage behaviour. In the Muhammadiyah context, this is reflected in respondents' prior experience with socio-religious activities, which fosters self-efficacy and confidence in adopting digital waqf platforms. Thus, stronger perceptions of control directly contribute to increased actual usage.

H2: Perceived Behavioural Control (PBC) → Intention to Use (IU)

Contrary to expectations, PBC does not significantly influence Intention to Use. While Ajzen (1991) and Venkatesh et al. (2012) emphasised that PBC is a strong predictor of behavioural intention, the present study suggests otherwise. The demographic profile of

respondents may explain this divergence—more than 60% were above 40 years of age—indicating that intention formation may depend less on individual control and more on social validation and institutional legitimacy (Morris et al., 2005). Hence, although respondents may feel capable of operating technology, their intention to use it is primarily shaped by external cues such as community endorsement and organisational legitimacy rather than personal control alone.

H3: Perceived Behavioural Control (PBC) → Social-Business Integration (SBI)

The analysis shows that PBC does not significantly influence Social-Business Integration (SBI). This contrasts with the assumption that individual control over technology would facilitate organisational efforts to manage the organisation (Verhoef et al., 2021), especially for integrating social and business dimensions. One plausible explanation is that SBI in the Muhammadiyah setting is not determined by individual technical ability but by collective trust and broader institutional legitimacy (Al-Sharafi et al., 2017; Suchman, 1995). Thus, while users may feel technically competent, this sense of control does not automatically foster social-business integration without shared organisational acceptance and systemic support.

H4: Perceived Behavioural Control (PBC) → Technology Legitimacy (TL)

The results confirm that PBC positively and significantly influences Technology Legitimacy (TL). This finding suggests that when individuals feel capable of using technology, it enhances the social and institutional legitimacy of that technology. Such results align with (Suchman, 1995), who emphasised that perceptions of control contribute to institutional legitimacy, and with (Al-Sharafi et al., 2017), who highlighted user trust and perceived efficacy as critical to legitimising digital waqf technologies. In the Muhammadiyah context, legitimacy arises not only from institutional endorsement but also from users' comfort and confidence in applying the technology.

Overall, the study demonstrates that **PBC significantly contributes to AUT (H1) and TL (H4), but does not significantly influence IU (H2) or SBI (H3)**. This indicates that PBC plays a more critical role in driving actual usage and strengthening technology legitimacy rather than in shaping behavioural intention or fostering social-

business integration. The divergence from earlier studies, particularly regarding IU and SBI, can be explained by the demographic and organisational characteristics of respondents, where intention and integration are more strongly tied to social endorsement and institutional validation than to perceived control alone. In the context of digital waqf management in Muhammadiyah, PBC is essential for actual implementation, but broader social and institutional factors remain the key catalysts for sustained adoption and integration.

7.4.2 Perceived Ease of Use (PEOU)

Perceived Ease of Use (PEOU) is one of the main constructs in the Technology Acceptance Model (TAM) developed by Davis (1989). This concept refers to the extent to which an individual believes that using a particular technology will be relatively easy to understand and operate without requiring excessive effort. In other words, if a system is perceived as easy to use, individuals are more likely to accept it and continue using it on a sustainable basis.

H5: Perceived Ease of Use (PEOU) → Actual Use of Technology (AUT)

The findings indicate that PEOU does not significantly affect Actual Use of Technology. This result diverges from the Technology Acceptance Model (TAM) proposed by Davis (1989), which posited that ease of use is a critical determinant of technology adoption. However, aligns with (Shih & Huang, 2009), who also found that while PEOU influences behavioural intention, it does not directly affect actual usage. In the Muhammadiyah context, the results suggest that actual use is less about usability and more about perceived legitimacy, trust, and social endorsement. This implies that even when a system is not perceived as particularly easy to use, individuals may still adopt it if it is endorsed by trusted religious and institutional authorities.

H6: Perceived Ease of Use (PEOU) → Intention to Use (IU)

The analysis reveals that PEOU does not significantly influence Intention to Use. This finding contradicts the TAM model (Davis, 1993a; Venkatesh et al., 2012), where perceived ease of use consistently predicts intention and aligns with (Teo et al., 2018), who found that perceived ease of use (PEOU) and technology complexity (TC) did not have a significant effect on English teachers' attitudes toward using technology in China. One explanation may be that intention in this study is driven by subjective norms and technology legitimacy rather than by usability factors. Users in religious and social enterprise settings may rely more on collective decision-making and institutional guidance (Gefen & Straub, 2000), which diminishes the role of individual usability perceptions. This indicates that the intention to engage with digital waqf systems in Muhammadiyah is not an individual choice based on convenience, but rather a communal one based on legitimacy and shared values.

H7: Perceived Ease of Use (PEOU) → Social-Business Integration (SBI)

The results suggest that PEOU has no significant relationship with Social-Business Integration. Previous research (Molinillo & Japutra, 2017) found that the adoption of digital technology in SMEs enhances competitiveness but is influenced by innovation, organisational, and environmental factors, and is best understood through the integration of DOI, TOE, and Institutional theories. The divergence in this study may be explained by the complexity of integrating social and business functions in waqf management, which goes beyond individual user perceptions. In Muhammadiyah's institutional environment, integration is influenced by governance structures, trust, and collective legitimacy rather than individual perceptions of ease. Thus, the absence of significance highlights the dominance of structural and institutional dynamics over individual-level usability considerations.

H8: Perceived Ease of Use (PEOU) → Technology Legitimacy (TL)

The findings also indicate that PEOU does not significantly affect Technology Legitimacy. This contradicts the assumption that ease of use enhances legitimacy by building user confidence (Suchman, 1995). Instead, the results suggest that legitimacy

in the Muhammadiyah context is shaped primarily by institutional trust, religious authority, and alignment with social values rather than by technical usability. The results are consistent with meta-theoretical critiques of big data and algorithms (Lindebaum et al., 2024), highlighting that legitimacy emerges not from usability or algorithmic sophistication but from underlying values, authority, and trust. The implication for both theory and practice is the need to integrate social, ethical, and religious dimensions into assessments of knowledge validity and technology adoption, ensuring that management science and technology remain oriented toward truth and societal benefit rather than mere technical or commercial efficiency.

In summary, none of the hypothesised relationships between PEOU and AUT, IU, SBI, or TL were significant. This contrasts with many prior studies within TAM and UTAUT frameworks that highlight ease of use as a fundamental driver of technology adoption. The findings suggest that in the Muhammadiyah context, **usability is not the decisive factor in technology adoption or legitimacy**. Instead, trust, institutional endorsement, and social validation play a far more central role in shaping behaviour and integration. This indicates a contextual divergence, where adoption and integration of digital waqf technologies are less about *ease* and more about *collective legitimacy and institutional alignment*.

7.4.3 Perceived Usefulness (PU)

H9: Perceived Usefulness (PU) → Actual Use of Technology (AUT)

This finding contradicts the core assumptions of the Technology Acceptance Model (TAM) (Davis, 1989) and its extensions, such as UTAUT (Venkatesh et al., 2003), where usefulness has consistently been reported as one of the strongest predictors of actual usage. Prior research in financial technology adoption also emphasised that higher perceived usefulness generally leads to more frequent technology utilisation (Alalwan et al., 2017; Al-Saedi et al., 2020). However, in the Muhammadiyah waqf context, actual use appears not to be determined by individual-level perceptions of utility but rather by institutional trust, legitimacy, and collective endorsement. This suggests that even when users recognise the benefits of digital waqf, they may refrain from using it if they perceive uncertainty in legitimacy or lack of organisational support.

Such findings resonate with studies in Islamic social finance (Rogahang & Teol, 2024), which highlight that adoption in religiously grounded contexts depends more on **social approval and religious authority** than on perceived utility alone.

H10: Perceived Usefulness (PU) → Intention to Use (IU)

The path from PU to IU is significant ($\beta = 0.246$, $t = 2.391$, $p = 0.017$), confirming that PU positively shapes intention to use digital waqf platforms. This result is consistent with Davis (1989) and Venkatesh et.al (2012), who emphasised that usefulness is a central determinant of behavioural intention across technological contexts. In line with these studies, the finding suggests that when users perceive clear benefits—such as increased transparency, improved efficiency in fund allocation, and easier access to waqf participation—they demonstrate stronger intentions to adopt. Moreover, this reinforces the argument that **PU plays a motivational role at the intention stage**, though its impact weakens at the actual adoption stage due to intervening legitimacy and institutional factors. Hence, in Muhammadiyah, users' willingness to adopt digital waqf systems is strongly driven by their recognition of practical benefits, but whether this intention translates into actual usage depends on external validation.

H11: Perceived Usefulness (PU) → Social-Business Integration (SBI)

The relationship between PU and SBI is not significant, diverging from evidence in innovation adoption research, which found that usefulness perceptions facilitate broader integration of technology in social and business processes. The absence of significance in this study can be explained by the collective nature of SBI in Muhammadiyah's ecosystem. Integration of digital waqf into both social and business activities requires structural support, governance alignment, and organisational strategy, which go beyond individual users' perceived benefits. Thus, while individuals may find the technology useful, the extent to which it integrates into wider social-business functions depends on institutional design and collective decision-making rather than individual-level perceptions. In line with broader research on business models and technology (Baden-Fuller & Haefliger, 2013), this finding reflects that business models operate as

independent systems that mediate the relationship between technology and organisational performance. The development and integration of digital waqf technology, therefore, is not solely driven by its perceived usefulness but is strategically shaped by the organisation's business model decisions regarding openness, user engagement, and governance structures.

H12: Perceived Usefulness (PU) → Technology Legitimacy (TL)

Similarly, PU does not significantly influence TL, which diverges from prior studies suggesting that usefulness perceptions contribute to legitimacy by reinforcing trust in technology (Suchman, 1995). Instead, the results indicate that legitimacy in the Muhammadiyah waqf context is shaped more strongly by religious alignment, ethical considerations, and institutional endorsement. These findings echo (Skitka et al., 2009), who emphasised that legitimacy is not established by utility perceptions but by conformity to religious norms and institutional authority. Hence, even if users acknowledge the usefulness of digital waqf systems, they may not automatically perceive them as legitimate without clear validation from trusted religious and organisational actors.

In summary, PU significantly predicts **Intention to Use** but does not significantly influence **Actual Use, Social-Business Integration, or Technology Legitimacy**. This partially aligns with TAM and UTAUT, which highlight usefulness as a critical factor in shaping behavioural intention but diverge in actual usage and organisational outcomes. The findings suggest that in the Muhammadiyah digital waqf context, PU operates primarily at the **intention stage**, motivating individuals to consider adoption. However, the translation of intention into actual behaviour and broader legitimacy or integration outcomes is constrained by **collective, institutional, and religious factors** beyond individual perceptions of utility. This highlights a contextual shift from the dominance of **individual rational choice (TAM)** to the importance of **socially embedded, legitimacy-driven adoption** processes in Islamic social finance.

7.4.4 Subjective Norm (SN)

H13: Subjective Norm (SN) → Actual Use of Technology (AUT)

SN's effect on AUT is insignificant ($\beta = 0.044$, $p = 0.748$). This finding diverges from the Theory of Reasoned Action (TRA) (Ajzen, 1985) and Technology Acceptance Model (Davis, 1993a), which have consistently emphasised the role of normative influence in adopting driving. In many technology adoption studies (Dalle et al., 2024; Talukder & Quazi, 2011; Vannoy & Palvia, 2010), social pressure and expectations from peers, colleagues, or leaders have positively affected usage. However, in the Muhammadiyah waqf context, actual use appears to be driven less by external social expectations and more by **institutional trust and perceived legitimacy**. This suggests that individuals may acknowledge social influence but do not necessarily act on it unless they perceive the system as valuable and legitimate. The result highlights a contextual distinction, where external pressures cannot translate into actual usage behaviour without accompanying structural and institutional validation.

H14: Subjective Norm (SN) → Intention to Use (IU)

Similarly, SN does not significantly affect IU ($\beta = 0.065$, $p = 0.694$). This is inconsistent with TRA and prior empirical evidence, where subjective norms often serve as a significant determinant of behavioural intention (Ajzen, 1991; Venkatesh & Davis, 2000). SN has generally been reported as a stronger driver in technology adoption across collectivist cultures than in individualistic contexts (Dalle et al., 2024). The divergence in this study suggests that in the digital waqf setting, individuals prioritise **perceived benefits (usefulness)** and **institutional legitimacy** over normative pressures when forming intentions to adopt. This is particularly relevant in religiously embedded financial ecosystems, where personal conviction and trust in governance mechanisms may override external social expectations.

H15: Subjective Norm (SN) → Social-Business Integration (SBI)

The relationship between SN and SBI is significant and positive ($\beta = 0.414$, $t = 3.087$, $p = 0.002$). This confirms that collective values and social endorsement are essential for

embedding digital waqf into Muhammadiyah's social-business ecosystem. The finding is consistent with Yunus (2010, 2023), who emphasised that community norms and peer influence are critical in institutional-level technology adoption. Unlike individual-level outcomes such as intention or use, integration into social-business practices requires **collective coordination and shared norms** strongly shaped by social endorsement. In Muhammadiyah, where organisational culture and communal values are central, SN becomes a powerful mechanism for ensuring digital waqf practices align with social and business missions.

H16: Subjective Norm (SN) → Technology Legitimacy (TL)

The results show that SN significantly influences TL ($\beta = 0.446$, $t = 3.899$, $p < 0.001$). This finding is consistent with Suchman's (1995) argument that legitimacy is fundamentally a **socially conferred construct**. In the Muhammadiyah waqf ecosystem, legitimacy is not derived solely from technical features or utility, but from the **endorsement of respected leaders, religious authorities, and the broader community**. When these actors actively support digital waqf platforms, users perceive the system as appropriate and trustworthy. This aligns with prior findings in institutional theory (Scott, 2005), highlighting the importance of normative and cultural-cognitive legitimacy for sustaining adoption. Thus, subjective norms serve as a critical determinant of legitimacy in contexts where religious and communal validation are paramount.

The results indicate that SN does not significantly influence **individual-level outcomes** such as intention or actual use (H13–H14). However, it strongly affects **organisational and institutional-level outcomes** such as Social-Business Integration (H15) and Technology Legitimacy (H16). This nuanced finding diverges from mainstream TAM/TRA studies, where SN typically predicts behavioural intention, and instead underscores the unique dynamics of digital waqf adoption in Muhammadiyah. In this context, individual adoption is primarily shaped by **perceived usefulness and legitimacy**, while social norms and community endorsement more strongly determine collective adoption and legitimacy formation. This highlights the embedded nature of

technology adoption in Islamic social finance, where social legitimacy and collective values outweigh individual normative pressures in shaping adoption pathways.

7.4.5 Technology Legitimacy (TL)

H17: Technology Legitimacy (TL) → Actual Use of Technology (AUT)

The effect of Technology Legitimacy (TL) on Actual Use of Technology (AUT) is not significant ($\beta = 0.198$, $t = 1.352$, $p = 0.177$). This finding contrasts with legitimacy theory, where Suchman (1995) emphasised that legitimacy is a crucial enabler of organisational adoption. In this context, however, legitimacy does not automatically translate into actual usage (Čater et al., 2021). Instead, legitimacy seems to function as a **precondition for intention formation** rather than a direct driver of behaviour. Users may recognise that the digital waqf platform has institutional support and social endorsement, yet practical usage still depends on **individual readiness, technical ease, and perceived control**. Thus, while legitimacy is important, it alone cannot overcome barriers such as digital literacy gaps or a lack of technical familiarity among users.

H18: Technology Legitimacy (TL) → Intention to Use (IU)

The path from TL to IU is significant and strongly positive ($\beta = 0.525$, $t = 3.556$, $p < 0.001$). This aligns with Suchman's (1995) argument that legitimacy increases a practice's perceived appropriateness and desirability, motivating adoption. In the Muhammadiyah digital waqf context, legitimacy derives from **endorsement by leaders, alignment with Islamic values, and trust in institutional governance**. These forms of normative and cultural-cognitive legitimacy reduce uncertainty and build confidence among potential users, strengthening their intention to engage. This result highlights that **social validation and institutional endorsement are potent drivers of adoption intention**, particularly in religious and community-based financial ecosystems.

H19: Technology Legitimacy (TL) → Social-Business Integration (SBI)

The relationship between TL and SBI is insignificant ($\beta = 0.204$, $t = 1.503$, $p = 0.133$). This finding diverges from institutional theory (Scott, 2005), which suggests that legitimacy is necessary for embedding practices into broader organisational systems. In the case of Muhammadiyah, while legitimacy may build trust, it is insufficient to ensure the **structural integration of digital waqf into social-business practices**. Effective integration requires **complementary organisational resources**, such as governance capacity, infrastructure readiness, leadership alignment, and financial management systems. Without these supporting mechanisms, legitimacy remains symbolic rather than transformative in driving actual institutional integration.

The results reveal a nuanced role of technology legitimacy in digital waqf adoption. While TL does not directly influence **actual usage (AUT)** or **institutional integration (SBI)**, it plays a **critical role in shaping intention to use (IU)**. This suggests that legitimacy operates primarily as a **motivational and attitudinal driver**, creating the social and institutional conditions for adoption, but its impact must be complemented by **practical enablers (ease of use, governance, infrastructure)** to translate into actual behaviour or system-wide integration. In other words, legitimacy in the Muhammadiyah ecosystem builds **willingness**, but effective adoption and integration require **capability and structural support**.

7.4.6 Mediating Hypotheses

To further examine the mediating role of Technology Legitimacy (TL), this study tested a series of indirect hypotheses linking core constructs from the Technology Acceptance Model (TAM) and the Theory of Planned Behaviour (TPB) with three key outcomes: **Actual Use of Technology (AUT)**, **Intention to Use (IU)**, and **Social-Business Integration (SBI)**. The purpose of this analysis was to assess whether TL strengthens or weakens the indirect influence of **Perceived Behavioural Control (PBC)**, **Perceived Ease of Use (PEOU)**, **Perceived Usefulness (PU)**, and **Subjective Norms (SN)** on these outcomes. By systematically analysing each hypothesis (H20–H31), the discussion highlights how TL operates as a mediating mechanism within

Muhammadiyah's digital waqf management framework. Each hypothesis is presented individually, with findings compared to prior studies, both classical and recent, to provide a comprehensive interpretation of where this research aligns with or diverges from existing literature. This approach ensures analytical depth, contextual relevance, and academic rigour in evaluating indirect relationships.

H20: Perceived Behavioural Control (PBC) → Technological Legitimacy (TL) → Actual Use of Technology (AUT)

The hypothesis was not supported ($\beta = 0.064$, $T = 1.148$, $p = 0.252$). This indicates that PBC, while important for shaping confidence in using technology, does not significantly translate into actual use when mediated by TL. This contrasts with Ajzen's (1991) TPB, where PBC is expected to affect behaviour directly or indirectly. A possible explanation is that in organisational contexts such as Muhammadiyah, actual usage is determined by personal control and **structural readiness** (e.g., availability of digital platforms, enforcement of SIMAM/WaqfMu systems). Recent findings suggest that digital waqf adoption is hindered when institutional infrastructure is weak, even if users perceive themselves as capable (Almomani et al., 2024).

H21: Perceived Ease of Use (PEOU) → Technological Legitimacy (TL) → Actual Use of Technology (AUT)

This relationship was insignificant ($\beta = 0.015$, $T = 0.561$, $p = 0.575$). According to TAM (Davis, 1989), ease of use should encourage adoption, but our findings do not support this. Prior studies (Scherer et al., 2019) reported that in contexts with older users, ease of use is not a decisive factor since trust and perceived legitimacy weigh more heavily. Given that 61.2% of respondents in this study were over 40, this demographic factor likely explains the divergence from TAM predictions.

H22: Perceived Usefulness (PU) → Technological Legitimacy (TL) → Actual Use of Technology (AUT)

The indirect effect of PU on AUT was not significant ($\beta = 0.012$, $T = 0.564$, $p = 0.573$). While TAM identifies PU as a critical determinant of adoption (Davis, 1989), this finding suggests that recognising usefulness does not automatically drive usage if technology is not fully legitimised institutionally. Recent research by Arrasya and Muhtadi (2024) on waqf literacy shows that awareness of usefulness alone does not encourage digital waqf adoption without institutional endorsement and legitimacy-building initiatives.

H23: Subjective Norms (SN) → Technological Legitimacy (TL) → Actual Use of Technology (AUT)

The indirect pathway was also not significant ($\beta = 0.088$, $T = 1.263$, $p = 0.207$). Although SN are expected to shape behaviour in TPB (Ajzen, 1991), their impact here did not extend to actual usage. This result may be due to the **intention-behaviour gap**, where social influence shapes willingness but does not always translate into practice. (Almomani et al., 2024) Similarly, it was noted that positive attitudes toward digital waqf in Jordan were not matched by actual usage, largely due to limited institutional support and resource constraints.

H24: Perceived Behavioural Control (PBC) → Technological Legitimacy (TL) → Intention to Use (IU)

This hypothesis was supported ($\beta = 0.169$, $T = 1.985$, $p = 0.048$). When technology is perceived as legitimate, individuals with strong PBC are more likely to form an intention to adopt it. This aligns with Ajzen (1991) and Venkatesh et al. (2012), who argued that behavioural control enhances intention, particularly when supported by legitimising factors. A more recent study by Afifi (2024b) on the waqf business model confirms that empowerment and capability building among stakeholders improve intention to adopt innovative waqf management systems.

H25: Perceived Ease of Use (PEOU) → Technological Legitimacy (TL) → Intention to Use (IU)

The indirect effect was insignificant ($\beta = 0.040$, $T = 0.768$, $p = 0.443$). This diverges from TAM, which posits PEOU as central to intention. However, Scherer et al. (2019) found that older users are less influenced by ease of use and more by legitimacy and trust. Considering the age profile of respondents in this study, this demographic factor likely reduces the predictive power of PEOU.

H26: Perceived Usefulness (PU) → Technological Legitimacy (TL) → Intention to Use (IU)

This relationship was also insignificant ($\beta = 0.033$, $T = 0.676$, $p = 0.500$). While PU often predicts intention (Davis, 1989), in this study, legitimacy was insufficient to mediate its influence. Mohd Thas Thaker (2018) reported a similar outcome, showing that perceived usefulness did not strongly predict waqf crowdfunding adoption without the support of trust and governance legitimacy.

H27: Subjective Norms (SN) → Technological Legitimacy (TL) → Intention to Use (IU)

This pathway was significant ($\beta = 0.234$, $T = 2.537$, $p = 0.011$). Social influence, mediated by legitimacy, significantly increases intention to adopt technology. This is consistent with Ajzen (1991) and Venkatesh et al. (2012), and it resonates strongly with the Muhammadiyah context, where collective identity and community norms play a central role. Morris et al. (2005) and Arrasya & Muhtadi (2024) also confirm that social endorsement and legitimacy are more influential than individual technical perceptions in shaping intention in collectivist or religious communities.

H28: Perceived Behavioural Control (PBC) → Technological Legitimacy (TL) → Social-Business Integration (SBI)

The result was not significant ($\beta = 0.066$, $T = 1.221$, $p = 0.223$). While PBC may encourage adoption intention, it does not directly contribute to broader socio-business integration when mediated by TL. This suggests that organisational and structural factors, such as coordination between councils and adequate policies, are more critical in achieving integration. Afifi (2024) also emphasises that social business integration in waqf models requires systemic alignment, not just individual capability.

H29: Perceived Ease of Use (PEOU) → Technological Legitimacy (TL) → Social-Business Integration (SBI)

The indirect effect was insignificant ($\beta = 0.015$, $T = 0.593$, $p = 0.553$). This indicates that technical simplicity does not necessarily foster socio-business integration. Afifi (2024) and Jafar et al. (2025) argue that digital waqf initiatives require legitimacy and institutional embedding to influence social and business systems.

H30: Perceived Usefulness (PU) → Technological Legitimacy (TL) → Social-Business Integration (SBI)

The mediation pathway was not significant ($\beta = 0.013$, $T = 0.528$, $p = 0.598$). Although usefulness is central in TAM, in this case, organisational legitimacy and strategic collaboration appear more decisive in driving socio-business integration. This aligns with Almomani et al. (2024), who found that usefulness was insufficient to foster waqf digitalisation without institutional reforms.

H31: Subjective Norms (SN) → Technological Legitimacy (TL) → Social-Business Integration (SBI)

The result was not significant ($\beta = 0.091$, $T = 1.363$, $p = 0.174$). While social norms influence intention, they do not automatically extend to organisational-level socio-business integration. This supports Afifi's (2024) observation that the successful integration of waqf business models depends on **multi-stakeholder collaboration** and structural governance rather than social influence alone.

Technology Legitimacy significantly mediated only H24 (PBC → IU) and H27 (SN → IU). These findings emphasise that behavioural control and social influence—rather than technical perceptions of ease and usefulness—are the strongest predictors of intention to adopt digital waqf technology in Muhammadiyah. This divergence from TAM is explained by the demographic profile of respondents and by the institutional nature of waqf management, where legitimacy, trust, and social acceptance are paramount. For broader outcomes such as **Actual Use** and **Social-Business Integration**, legitimacy alone was insufficient, underscoring the need for organisational readiness, policy enforcement, and stakeholder collaboration.

7.5 SUMMARY

This chapter presents the distribution of respondents, the results of data testing through SEM-PLS, and a discussion of the main findings. The study results indicate that technological legitimacy is important in increasing the intention to use technology in the social business context in Muhammadiyah. Out of the 31 proposed hypotheses, only 8 hypotheses were accepted, consisting of 6 direct hypotheses and 2 mediation hypotheses. Notably, all hypotheses related to Perceived Ease of Use (PEOU) were rejected due to their lack of statistical significance ($P\text{-value} > 0.05$). This indicates that Perceived Ease of Use does not have a significant impact on the dependent variables within this study.

This analysis supports RO 3, which is to identify significant factors that influence the performance of the Digital Waqf model: Perceived Behavioural Control,

Subjective Norms, Perceived Usefulness, and Technological Legitimacy in influencing the adoption and integration of technology. In addition, most respondents are over 40 years old, which can affect technology adoption due to experience and habit factors. This finding emphasises the importance of building trust and the legitimacy of technology to encourage its application in digital-based waqf management.



CHAPTER EIGHT

FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

8.1 FINDINGS

This study explored the digital transformation in Muhammadiyah waqf management by analysing three main research objectives. The research findings highlight the institutional framework, digital technology adoption, and behavioural aspects that influence the successful implementation of the Digital Business Social Waqf Model (DSB-WM).

8.1.1 Research Objective #1: Existing Framework for Muhammadiyah Waqf Management

Muhammadiyah manages waqf assets through a structured system with a decentralised approach, involving various levels of the organisation from the centre to the regions. This model provides a cessation in managing waqf assets but still demands high accountability. In practice, Muhammadiyah implements a two-tier management system, where the Waqf Utilisation Council (MPW) is responsible for waqf administration. At the same time, the Muhammadiyah Business Association (AUM) coordinates with the assemblies related to waqf asset management in various sectors, such as the Council for Higher Education, Research, and Development (DIKTILITBANG), the Council for Elementary and Secondary Education (DIKDASMEN); the Council for Health (MPKU), the Council for Community Empowerment (MPM), the Council for Economic Business and Tourism (MEBP); the Council for Social Welfare Development (MPKS).

Regarding regulation, waqf management in Muhammadiyah has been adjusted to the applicable legal provisions, namely Law Number 41 of 2004 concerning Waqf and Government Regulation Number 42 of 2006. Compliance with these regulations ensures accountability and transparency in waqf management so that the entrusted

assets can be utilised optimally under shariah principles and organisational objectives. In addition, a strict supervision system and a wide organisational network are the main strengths of Muhammadiyah's waqf management. Centralised asset ownership ensures security and stability in management while managing special sectors through various assemblies, allowing for more focused and effective waqf utilisation.

Despite having a structured management system, the implementation of Muhammadiyah waqf management still faces several challenges. One of the main challenges is the incomplete digitisation of waqf asset data, which can hinder the effectiveness of management and reporting. In addition, the complexity of waqf management can slow down decision-making and program implementation. Limited coordination between institutions is also an obstacle to optimising the utilisation of waqf assets. Therefore, efforts are needed to increase administrative efficiency, strengthen coordination, and develop a comprehensive digitalisation system to ensure more effective and sustainable waqf management.

8.1.2 Research Objective #2: Construct and Adopt Digital Technology in Waqf Management

This study proposes the Digital Social Business Waqf Model (DSB WM) as an innovative approach to managing Muhammadiyah waqf. This model focuses on three main dimensions: technology integration (SIMAM, Waqfmu, and Fintech), strengthening social business, and financial sustainability. The success of this model is supported by three key elements: increasing digital literacy, training and capacity building, and collaboration with stakeholders. Digitalisation has been implemented through SIMAM for more efficient and transparent asset recording, and using crowdfunding and fintech platforms to optimise fundraising. However, certain challenges remain, such as limited human resources and IT infrastructure, a lack of coordination between stakeholders, high implementation costs, and low digital literacy among waqf managers, which hinder system optimisation.

Suggestions from IT experts include: To accelerate technology adoption in Waqf Management, a continuous awareness campaign is needed through seminars,

workshops, digital publications, and strategic discussions. In addition, needs-based training programs must include analysis of waqf management challenges, interactive materials for IT personnel, flexibility of online and offline training schedules, and continuous evaluation to ensure their effectiveness. Collaboration with academics, system developers, and shariah financial practitioners is also a key factor in providing the best standards in the implementation of DSB WM while also helping to update the system and overcome technical obstacles that arise. With this approach, Muhammadiyah can manage Waqf more effectively, transparently, and sustainably in the digital era.

8.1.3 Research Objective #3: Factors Influencing Technology Adoption

The findings from the quantitative data validity analysis show that the direct hypothesis regarding the influence of Perceived Behavioural Control (PBC) on Actual Use of Technology (AUT) and Technology Legitimacy (TL) has proven to be very significant. In addition, Perceived Usefulness (PU) significantly influences Intention to Use (IU). The results of the study also indicate that Subjective Norms (SN) play a strong role in influencing Social-Business Integration (SBI) and Technology Legitimacy (TL). Furthermore, Technology Legitimacy (TL) has proven to have a significant impact on Intention to Use (IU). In addition, the analysis of the indirect hypothesis shows that Perceived Behavioural Control (PBC) and Subjective Norms (SN) significantly influence the Intention to Use (IU) through Technology Legitimacy (TL) as a mediating variable. These findings confirm that the technology legitimacy factor plays an important role in bridging the relationship between individual and social factors on the intention to use technology.

Although the Technology Acceptance Model (TAM) states that perceived ease of use (PEOU) play an important role in technology adoption, this study found that both factors did not have a significant effect on Intention to Use (IU), Actual Usage of Technology (AUT), and Social-Business Integration (SBI). This finding indicates that stakeholders and managers prioritise trust and legitimacy over technology's mere ease or usefulness. Furthermore, technological legitimacy acts as a mediator in the

relationship between social norms and usage intention, confirming that regulatory and religious validation play a crucial role in driving waqf digitalisation.

8.2 CONCLUSIONS

Muhammadiyah has a strong institutional framework in waqf management, supported by appropriate regulations and management systems such as SIMAM and WaqfMu. However, challenges remain in terms of digitising asset data, coordination between institutions, and bureaucratic complexity that hinders efficiency and transparency. With extensive social and economic capital and organisational networks, Muhammadiyah has great potential to adopt technology for more modern waqf management. Technology can strengthen socio-business integration through digital platforms such as waqf crowdfunding, blockchain for asset recording, and productive waqf management systems to increase transparency, efficiency, and community participation. Based on various relevant theories, Muhammadiyah must strengthen policies, operations, and digitalisation strategies and simplify bureaucracy and coordination between institutions so that the adopted waqf technology system can be integrated optimally, modernly, efficiently, and sustainably.

The Digital Social Business Waqf Model (DSB WM) is an innovative approach to responding to these challenges by integrating technology into social businesses and ensuring financial sustainability. The success of this model depends on increasing digital literacy, training and capacity building, and collaboration with stakeholders. This digitalisation allows SIMAM to record assets more efficiently and transparently and utilise WaqfMu as a crowdfunding and fintech platform to optimise fundraising. However, the implementation of this model faces obstacles such as limited human resources and IT infrastructure, a lack of coordination between stakeholders, high implementation costs, and low digital literacy among waqf managers. To overcome these obstacles, IT experts recommend ongoing awareness campaigns through seminars, workshops, digital publications, strategic discussions, needs-based training that includes analysis of waqf management challenges, interactive materials for IT personnel, flexible training schedules, and ongoing evaluation. Collaboration with academics, system developers, and shariah finance practitioners is a key factor in

ensuring the best standards for the implementation of DSB WM and helping to overcome technical obstacles that arise. With this approach, Muhammadiyah can manage waqf more effectively, transparently, and sustainably in the digital era.

In this context, the main factors influencing the potential performance of the digital waqf model with social business integration are perceived individual control over technology use (Perceived Behavioural Control/PBC), benefit of technology (Perceived Usefulness/PU), Subjective Norms/SN, and Technological Legitimacy/TL. Subjective Norms, Perceived Usefulness and Technological Legitimacy significantly increase public trust and ensure technology adoption in the digital waqf system. This ultimately strengthens transparency and accountability when managing waqf funds. In addition, the perception of individual control over technology use also positively impacts the actual use of the digital waqf platform, which contributes to the effectiveness and efficiency of technology-based waqf management. In contrast, factors such as Perceived Ease of Use/PEOU, which is generally a key factor in technology adoption, do not significantly influence this context. This suggests that the success of the Digital Social Business Waqf Model (DSB WM) is more dependent on aspects of trust, usefulness, legitimacy, and social integration than simply the ease of technology. Furthermore, technological legitimacy acts as a mediator in the relationship between social norms and usage intentions, indicating that regulatory and religious validation are crucial factors in encouraging technology adoption and improving the performance of the digital waqf model in managing funds and assets in a more structured and sustainable manner. Thus, strengthening coordination between institutions, investing in technological infrastructure, and developing digital literacy strategies are fundamental in ensuring the successful implementation of the Digital Social Business Waqf model in the Muhammadiyah environment.

8.3 IMPLICATION

8.3.1 Theory Implications

The waqf management in Muhammadiyah has developed by combining modern approaches while adhering to Islamic principles. Various theoretical perspectives can be used to analyse how Muhammadiyah organises and develops waqf, ensuring

sustainability, transparency, and social impact. This section examines the alignment between theoretical frameworks and empirical findings on the management of Muhammadiyah waqf. Key theories such as Legitimacy Theory, Stakeholder Theory, Non-Profit Organisation Theory, Shariah Governance Concept, Social Business Integration Theory, and Technology Adoption Theory provide a comprehensive perspective to assess the effectiveness and challenges in implementing waqf digitalisation, governance, and financial sustainability. The following table presents a structured comparison between these theories, their core concepts, and findings from

No	Theory	Description	Findings	Consistency
1	Legitimacy Theory (Suchman, 1995)	Organisational legitimacy is obtained through social acceptance: pragmatic (benefits for stakeholders), moral (alignment with values/norms), and cognitive (accepted existence). Transparency and accountability are key elements in maintaining legitimacy.	Digitalisation in waqf management enhances transparency and accountability, strengthening Muhammadiyah's legitimacy as a waqf manager. Technology legitimacy also plays a role in increasing stakeholder trust.	Valid
2	Stakeholder Theory (Freeman, 1984)	For sustainability, organisations must balance the interests of various stakeholders, each with different roles and influences within the organisation.	The success of waqf digitalisation depends on stakeholder support, including donors (wakif), regulators, beneficiaries, and waqf managers (nazir). Collaboration with academics and Islamic financial practitioners is key to successfully implementing the DSB-WM model.	Valid
3	Non-Profit Organisation Theory (Salamon & Anheier, 1992)	Non-profit organisations have characteristics such as not being profit-oriented and being based on public interest. Significant challenges include resource limitations and complex performance measurement.	Muhammadiyah is crucial in providing social services that the private sector or the government may not always meet. As a non-profit organisation, Muhammadiyah's management balances its social mission and sustainable financial management.	Valid

4	Shariah Governance Concept (Al-Ghazali, Kahf)	Shariah-based governance emphasises ethics, accountability, and public benefit (maslahah). Waqf management must adhere to shariah principles.	Waqf governance in Muhammadiyah is based on Tarjih decisions, which must align with shariah principles. Muhammadiyah also has a supervisory board to ensure compliance with shariah.	Valid
5	Social Business Integration Theory (Yunus, 2023)	Social businesses create both economic and social value. This model allows waqf organisations to enhance efficiency and financial sustainability.	Muhammadiyah manages waqf in the form of Amal Usaha Muhammadiyah (AUM), such as hospitals, schools, and universities, based on productive waqf. Profits from these enterprises are not distributed to individuals but are used to develop social services, education, and healthcare for society.	Valid
6	Technology Adoption Theory (Davis, 1993; Rogers, 2003)	Technology adoption is influenced by perceived usefulness, ease of use, and social and organisational factors. The innovation diffusion model explains the stages of technology adoption.	Behavioural aspects influence the intention to use digital waqf platforms more than ease of use or perceived usefulness. The TAM theory is not significant in this study. Digital literacy and training are needed to enhance technological readiness among waqf managers (Nazir)	Partially Valid

8.3.2 Policy Implications

Based on the findings that have been analysed, several policy implications can be taken to improve the effectiveness of waqf management, especially in the context of Muhammadiyah:

i. Strengthening Regulation

The government and shariah authorities need to establish clearer policies supporting the use of digital technology in waqf management. Strong regulations will increase the legitimacy of waqf digitalisation, ensure

compliance with shariah principles, and increase transparency and accountability in waqf asset management.

ii. Increasing Digital Waqf Literacy

Digital literacy is intended for nazir (waqf managers) and wakif (waqf providers) to improve the effectiveness of management and participation in digital waqf. Waqif, who understands the mechanism of digital waqf, its benefits, and security, will be more confident and motivated to contribute to technology-based waqf schemes.

iii. Training and Capacity Building Program

A comprehensive training program is needed to improve the readiness of waqf managers to adopt digital technology. This training covers the technical aspects of using technology, ethics and compliance with shariah principles.

iv. Collaboration with Academics and Islamic Finance Practitioners

The success of waqf digitalisation depends on the synergy between academics, Islamic finance practitioners, and waqf managers. This collaboration can help prepare a more effective waqf management model based on research, under shariah principles, and community needs.

With the implementation of this policy, waqf management, especially in Muhammadiyah, can become more efficient and sustainable and remain in accordance with Islamic values, providing wider benefits to the community.

8.3.3 Practical Implications

i. Investment in Digital Infrastructure

Further development of the Muhammadiyah Waqf Management Information System (SIMAM) and other digital platforms with more sophisticated features can increase transparency and security in waqf management. In addition, the development of mobile applications can make it easier for waqf donors to donate and monitor the use of waqf funds in real-time.

ii. Increasing the Capacity of Waqf Managers

Implementing a certification program for waqf nazirs in collaboration with the Indonesian Waqf Board (BWI) and the National Professional Certification Agency (BNSP) can create more competent and professional waqf managers. Training programs based on shariah financial technology also need to be carried out periodically to ensure that managers can optimally adopt technology in waqf governance. With this capacity increase, waqf management can be carried out more effectively and dependably.

iii. Digital Education and Literacy for Waqif

A national campaign introducing the concept of digital waqf and its benefits for social welfare is needed to increase community participation in technology-based waqf. Interactive educational modules explaining the mechanism of digital waqf, including its governance and security, can help improve the understanding of waqf. In addition, collaboration with shariah fintech and digital marketplaces can expand public access to waqf and increase transparency in its management.

8.4 RECOMMENDATIONS

To ensure the sustainability and effectiveness of waqf digitalisation, strategic steps involving various parties are needed. This recommendation is addressed to the Muhammadiyah Leadership, policymakers, and researchers in the future, so that innovation in waqf management can run optimally.

i. **The Central Board of Muhammadiyah**

Muhammadiyah should prioritise digital transformation within the organisation by enhancing coordination between institutions and centralising waqf data. A structured approach to integrating digital waqf platforms across different Muhammadiyah entities will ensure more efficient, transparent, and accountable management. By leveraging digital technology, Muhammadiyah can optimise waqf utilisation for social and economic empowerment.

ii. **Policymakers (Government, DSN MUI)**

Policymakers should design regulations that support the harmonisation of fintech innovation with shariah principles and national policies. This includes creating legal frameworks that facilitate the adoption of blockchain, AI, and other emerging technologies in waqf management while ensuring compliance with Islamic financial principles. Regulatory clarity will encourage greater public trust and broader adoption of digital waqf solutions.

iii. **Future Research**

1. Analyse the long-term impact of digital waqf transformation on financial sustainability.
2. Compare Muhammadiyah's digital waqf management strategies with those of other organisations globally to identify best practices and areas for improvement.

3. Explore the role of Artificial Intelligence (AI) and Big Data in waqf decision-making processes, particularly in predicting waqf trends, optimising asset allocation, and enhancing donor engagement.

By implementing these recommendations, Muhammadiyah can strengthen its leadership in digital waqf management, ensuring a sustainable and socially impactful future for waqf institutions.



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APPENDIX I

INTERVIEW QUESTIONS AND THEMATIC FRAMEWORK

STUDENT IDENTITY

Name : Junarti
Institution : International Islamic University Malaysia (IIUM)
Program : PhD in Islamic Banking and Finance
Thesis Title : *Legitimacy of Waqf Management Technology and Social-Business Integration within Muhammadiyah Organization*

GENERAL INTERVIEW OBJECTIVE

To gain an in-depth understanding of Muhammadiyah's strategies, legitimacy principles, and practices in waqf management, especially regarding the use of technology, integration of social-business values, organizational coordination, and Islamic legal conformity.

A. Council for Waqf Utilization of the Central Board of Muhammadiyah

Interview approach: Reviewing in-depth information about strategies, policies, and implementation management in Muhammadiyah, especially those related to technology legitimacy and social business integration.

Theme	Substance of Questions
General Policies and Strategies	<ol style="list-style-type: none">1. What is <i>Muhammadiyah's</i> strategy in optimizing the management of waqf assets nationally?2. What is <i>Muhammadiyah's</i> current policy regarding the use of technology in Waqf management?3. How does <i>Muhammadiyah</i> ensure Sharia's legitimacy in applying waqf management technology?
Challenges and Innovations	<ol style="list-style-type: none">4. What are the biggest challenges Muhammadiyah faces in managing Waqf in this digital era?5. What latest innovations are being developed or implemented in managing <i>Muhammadiyah</i> waqf?6. How does the Assembly view the potential of fintech or blockchain in waqf management?
Coordination and Implementation	<ol style="list-style-type: none">7. How does the Waqf Utilization Council coordinate waqf management at various levels of <i>Muhammadiyah</i> organizations?8. What steps are taken to increase transparency and accountability in Waqf management?9. How the Assembly handles the differences in conditions and challenges of waqf management in various regions
Social-Business Integration	<ol style="list-style-type: none">10. How does <i>Muhammadiyah</i> integrate social and business aspects in developing waqf assets?11. What is <i>Muhammadiyah's</i> waqf assets' diversification and development policy?12. How does the Assembly ensure that the community can optimally feel the benefits of waqf?
Human Resource Development and Literacy	<ol style="list-style-type: none">13. How does the Assembly prepare <i>Muhammadiyah</i> human resources to face digital transformation in waqf management?

	14. What is <i>Muhammadiyah's</i> strategy for increasing waqf literacy among members and the public?
Cooperation and Evaluation	15. Is there any cooperation with external parties (government, private sector, or international institutions) in the <i>Muhammadiyah</i> waqf? 16. How does the Assembly measure the success of the waqf management program nationally?
Vision of the Future	17. What is <i>Muhammadiyah's</i> long-term plan for developing waqf in Indonesia? 18. What are the expectations and vision of the Assembly for the future of waqf management in <i>Muhammadiyah</i> with the integration of technology and socio-business aspects?

B. Council for Waqf Utilization of the Provincial Board (Jakarta and Yogyakarta)

Interview approach: Review in-depth information on implementation policy management at the regional level, primarily related to technology and social business integration.

Theme	Substance of Questions
Policy Implementation	1. How is the implementation of central policies related to waqf management in your area? 2. Are there significant differences between central policies and implementation at the regional level in terms of waqf management? If so, can it be explained? 3. How do you align your waqf management policy with your area's needs and potentials?
Challenges and Opportunities	4. What are the specific challenges your region faces in managing waqf? 5. How does current technology help manage and develop waqf assets in your area? 6. What are the main obstacles to adopting new technology for waqf management in your area?
Strategy and Programs	7. What strategies do you implement to optimize the utilization of waqf assets in your area? 8. Are any specific programs or initiatives related to waqf management unique in your area? 9. How do you involve local communities in developing and utilizing waqf assets?
Transparency and Accountability	10. How do you ensure transparency and accountability in waqf management at the regional level? 11. What steps are taken to increase public confidence in waqf management in your area?
Coordination and Cooperation	12. How is the coordination between your region and the Central Executive of <i>Muhammadiyah</i> regarding waqf management? 13. Is there any cooperation with external parties (government, private sector, or other institutions) in waqf management in your area?
Evaluation and Development	14. How do you measure the success of the waqf management program in your area? 15. What are your area's long-term development plans for waqf assets?
Human Resources	16. How do you prepare human resources in the region to face digital transformation in waqf management? 17. What efforts are being made to improve the competence of Waqf managers in your area?

Social-Business Integration	18. How does your region integrate social and business aspects in developing Waqf assets? 19. What is an example of successful socio-business integration in waqf management in your area?
Technology and Innovation	20. What are your area's latest technological innovations in Waqf management? 21. How does the community respond to the use of technology in Waqf management?
Vision of the Future	22. What is your vision for the future of waqf management in your region? 23. How do you see the role of technology in realizing that vision?

C. Council for Religious Opinion and Tajdid of the Central Board of Muhammadiyah

Interview approach: Understanding the perspective of Waqf Fiqh is mainly related to the validity of using technology and integrating social business in Waqf management in Muhammadiyah.

Theme	Substance of Questions
Legal Basis and Principles of Waqf Fiqh	1. What is the view of Islamic fiqh on the basic concept of waqf? 2. What main principles in waqf fiqh must be considered in modern waqf management?
Technology in Waqf Management	3. What is the view of fiqh on the use of technology in the management of waqf? 4. Are there any Sharia limitations that need to be considered in integrating technology into waqf management? 5. How can the validity of waqf transactions be ensured through digital platforms?
Innovation in Waqf	6. What is the fiqh's view on innovations in waqf, such as money or stock waqf? 7. What are the fiqh's challenges in developing contemporary forms of waqf?
Social-Business Integration in Waqf	8. How can Sharia compliance be maintained in developing waqf assets through business activities? 9. What limitations must be considered when integrating business aspects into waqf management?
Transparency and Accountability	10. What is the fiqh's view on the importance of transparency and accountability in the management of waqf? 11. Is the use of technology to increase transparency in line with the principles of waqf fiqh?
The Role of Nazhir and Technology	12. How does Fiqh view the role and responsibility of the nazhir in the digital era? 13. Is there a change in Nazhir's qualifications with the demand for mastery of technology?
Distribution of Waqf Benefits	14. What is the fiqh's view on optimizing the distribution of waqf benefits through technology? 15. Are there Sharia restrictions regarding waqf beneficiaries in the digital era?
Fatwas and Regulations	16. What is the role of the Tarjih and Tajdid Council in providing fiqh direction related to technology-based waqf management? 17. Has a particular fatwa been issued regarding the use of technology in waqf?

Contemporary Challenges	18. What is the biggest challenge from the perspective of fiqh in managing waqf in the digital era? 19. How do we respond to contemporary issues such as cryptocurrency or blockchain in the context of waqf?
The vision of Fiqh Waqf for the Future	20. What is your view on the evolution of waqf fiqh in the future? 21. What is your advice to ensure that the management of waqf remains in accordance with sharia but is also relevant to the times?

D. Technology Expert in Muhammadiyah Organization

Interview approach: Exploring the potential and challenges of implementing the latest technology in waqf management in Muhammadiyah.

Theme	Substance of Questions
Waqf Technology and Management	1. What is the latest technology most relevant for waqf management? 2. What are the potentials and challenges of using fintech to collect and distribute waqf?
Data Security and Privacy	3. How can waqf data and waqf beneficiaries be ensured in the digital system? 4. What steps are required to protect privacy in online waqf transactions?
System Integration	5. How to integrate various technology platforms for efficient waqf management? 6. What are the challenges in integrating the waqf system with the existing financial and social system?
Transparency and Accountability	7. How can technology increase transparency in waqf management? 8. What are the latest innovations in technology-based reporting and auditing systems for waqf?
Technology and Sharia	9. How can we ensure technology follows Sharia principles in waqf? 10. What are the challenges in integrating smart contracts with waqf sharia provisions?
Technology Adoption	11. What are the effective strategies to increase technology adoption among waqf managers? 12. How can resistance to technological changes in waqf management be overcome?
Human Resource Development	13. What technological competencies are needed for waqf managers in the digital era? 14. How can an effective technology training program for waqf managers be designed?
Innovation and the Future	15. What technological innovations do you predict will change the landscape of waqf management in the next 5-10 years? 16. How can technology help in the development of new waqf models?
Implementation Challenges	17. What are the biggest challenges in implementing technology for waqf management in organizations like Muhammadiyah? 18. How can the digital divide in waqf management be overcome?
Collaboration and Ecosystem	19. How can technology facilitate collaboration between waqf institutions? 20. What is the role of technology in building an integrated waqf ecosystem?

E. Council for Economy, Business, and Tourism

Interview approach: Acquire deep information about each council's role and contribution to the development and management of Muhammadiyah waqf, particularly related to integration technology and aspects of social business.

Theme	Substance of Questions
The Role of the Council in Waqf Management	<ol style="list-style-type: none">1. How does your council play a role in managing and developing <i>Muhammadiyah</i> waqf assets?2. What is the potential synergy between your assembly activities and waqf management?
Technology and Innovation	<ol style="list-style-type: none">3. How can technology help integrate the activities of your assembly with the management of waqf?4. Have any extraordinary innovations regarding waqf management been or are being developed by your council?
Challenges and Opportunities	<ol style="list-style-type: none">5. What are the main challenges facing your assembly in the context of waqf management?6. What opportunities do you see for optimizing the council's role in the development of waqf?
Coordination and Cooperation	<ol style="list-style-type: none">7. How is the coordination between your council and the <i>Muhammadiyah</i> Waqf Council?8. Is there any cooperation with external parties in waqf development?
Vision of the Future	<ol style="list-style-type: none">9. What is the vision of your council regarding the development of <i>Muhammadiyah</i> waqf in the future?10. What is your council's strategic plan to increase its contribution to waqf management?
Specific Questions	<ol style="list-style-type: none">11. What is the strategy for developing a business based on waqf assets in <i>Muhammadiyah</i>?12. What are the challenges in integrating business aspects into waqf management?13. How can tourism potential be utilized for waqf development?

APPENDIX II

THE QUESTIONNAIRE OF TECHNOLOGICAL TRANSFORMATION IN WAQF MANAGEMENT: A STUDY ON SOCIAL–BUSINESS INTEGRATION WITHIN THE MUHAMMADIYAH ORGANIZATION

QUESTIONNAIRE INTRODUCTION

Dear Sir/Madam,

Assalamu'alaikum warahmatullahi wabarakatuh,

My name is Junarti. I am a doctoral student pursuing a PhD in Islamic Banking and Finance at the International Islamic University Malaysia (IIUM). I am conducting a research study entitled: “*Technological Transformation in Waqf Management: A Study on Social–Business Integration within the Muhammadiyah Organization.*” This research aims to understand how technology is applied in waqf management and how it affects the integration of social and business dimensions within Muhammadiyah institutions. As part of this study, I seek input from practitioners, administrators, and stakeholders involved in waqf management. Therefore, I kindly request your participation in completing this questionnaire. Your responses and opinions will be highly valuable in helping me better understand the dynamics involved. They will contribute meaningful academic insights to the development of waqf management in Indonesia.

Please be assured that all information provided will be kept strictly confidential and will be used solely for academic purposes.


I sincerely appreciate your time, support, and willingness to participate in this study.

Thank you very much for your cooperation.

Yours sincerely,

Junarti

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International Islamic University Malaysia (IIUM)

 junarti92@gmail.com

Wassalamu'alaikum warahmatullahi wabarakatuh

INSTRUCTIONS

This questionnaire aims to collect data on respondents' perceptions regarding the use of technology in waqf management within the Muhammadiyah organization. Please indicate your level of agreement with each statement below by marking the appropriate response.

Scale	Description
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

SECTION A – RESPONDENT PROFILE

No	Question	Response
1	Name (optional)	_____
2	Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female
3	Age	<input type="checkbox"/> <30 <input type="checkbox"/> 30–40 <input type="checkbox"/> 41–50 <input type="checkbox"/> >50
4	Position within Muhammadiyah Organization	_____
5	Experience in waqf management	<input type="checkbox"/> <2 years <input type="checkbox"/> 2–5 years <input type="checkbox"/> >5 years
6	Region/Province	_____

SECTION B – RESEARCH STATEMENTS

1. Perceived Usefulness (PU)

No	Statement	1	2	3	4	5
PU1	Waqf management technology increases my work efficiency.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PU2	This technology makes it easier for me to manage the waqf.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PU3	I find this technology helpful in my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PU4	Using this technology improves my productivity in waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PU5	This technology allows me to manage waqf more accurately.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PU6	This technology helps me make better decisions in waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Perceived Ease of Use (PEOU)

No	Statement	1	2	3	4	5
PEOU1	I find it easy to learn how to use this waqf management technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PEOU2	My interaction with this technology is clear and understandable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PEOU3	Overall, this technology is easy to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PEOU4	I can easily find the necessary information using this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PEOU5	This technology has a user-friendly interface.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PEOU6	I do not experience difficulties operating the features of this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Attitude Toward Use (ATU)

No	Statement	1	2	3	4	5
ATU1	Using waqf management technology is a good idea.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATU2	I have a positive attitude toward using this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATU3	I believe using this technology will benefit the organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATU4	I enjoy using this technology in my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATU5	Using this technology makes my job more enjoyable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATU6	I am enthusiastic about exploring new features of this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Subjective Norm (SN)

No	Statement	1	2	3	4	5
SN1	People who are important to me think I should use this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN2	Muhammadiyah leadership supports the use of waqf management technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN3	My colleagues in the organization encourage using this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN4	Experts in the waqf field recommend using this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN5	The public has a positive perception of using technology in waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SN6	This technology is considered best practice within the waqf management community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Perceived Behavioral Control (PBC)

No	Statement	1	2	3	4	5
PBC1	I have the necessary resources to use this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC2	I have sufficient knowledge to use waqf management technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC3	I am confident that I can overcome obstacles in using this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC4	I have access to training or technical support if needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC5	I can integrate this technology into my work routine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PBC6	I can use this technology without assistance from others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Technological Legitimacy (TL) (Moderating Variable)

No	Statement	1	2	3	4	5
TL1	The use of technology in waqf management aligns with Islamic principles.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TL2	The Muhammadiyah community accepts this technology as a legitimate tool for waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TL3	This technology enhances transparency and accountability in waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TL4	The use of this technology is consistent with recent fatwas on waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TL5	This technology helps maintain the integrity and sanctity of waqf assets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TL6	This technology supports the Shariah objectives in waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Intention to Use (IU)

No	Statement	1	2	3	4	5
IU1	I intend to use waqf management technology in my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IU2	I plan to continue using this technology in the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IU3	I will recommend this technology to my colleagues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IU4	I intend to increase my use of this technology in my tasks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IU5	I will try new features of this technology when available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IU6	I plan to encourage the adoption of this technology within my organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Actual Use of Technology (AUT)

No	Statement	1	2	3	4	5
AUT1	I frequently use waqf management technology in my daily work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUT2	I use most of the features offered by this technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUT3	I rely on this technology to manage waqf.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUT4	I use this technology to generate reports and analyze waqf data.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUT5	I use this technology to communicate with waqf stakeholders.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AUT6	I integrate this technology with other systems in the organization.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Social–Business Integration (SBI)

No	Statement	1	2	3	4	5
SBI1	This technology helps integrate social and business aspects in waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SBI2	This technology improves business efficiency while maintaining social values.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SBI3	This technology facilitates collaboration between social and business units in Muhammadiyah.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SBI4	This technology helps balance social goals and financial returns in waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SBI5	This technology enhances the social impact of waqf investments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SBI6	This technology enables integrated reporting between social and business aspects of waqf management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GLOSSARY

- Accountability.** The obligation of waqf managers and institutions to be transparent, responsible, and answerable for their actions and decisions. Accountability ensures that every financial transaction, management process, and policy decision in waqf administration aligns with Islamic ethical standards and organizational integrity.
- Actual Use of Technology (AUT).** Describes the degree to which waqf managers utilize digital systems in their daily operations. It reflects the outcome of positive attitudes and behavioral intentions toward technology, as proposed by the Technology Acceptance Model (TAM).
- Adoption of Technology.** The acceptance and institutionalization of technological innovations in waqf management. Adoption is not merely technical but also cultural and ethical, involving the alignment of technology with Sharia values, organizational readiness, and stakeholder trust.
- Ahmad Dahlan, Kyai Haji.** Founder of Muhammadiyah and pioneer of Islamic social reform in Indonesia. His vision emphasized faith-based education, healthcare, and social welfare through productive waqf and community empowerment. His reformist ideas inspire the integration of social and business elements within Islamic charitable institutions.
- Al-Ma'un Philosophy.** An ethical foundation of Muhammadiyah derived from Surah Al-Ma'un, promoting compassion, social responsibility, and the eradication of poverty. It guides Muhammadiyah's approach to waqf to uplift communities through sustainable social-business programs.
- Al-Mawquf (Waqf Property).** The property or asset dedicated for perpetual charitable use under Islamic law. It may include land, buildings, or financial assets, which must remain intact and generate continuous benefits. The essence of *al-mawquf* is permanence and protection from private ownership.
- Al-Mawquf 'Alaih (Beneficiaries).** Individuals or groups entitled to receive the benefits of waqf as specified by the *waqif* (donor). In Muhammadiyah, beneficiaries commonly include students, patients, and the broader community served by its educational and healthcare institutions.
- Amal Usaha Muhammadiyah (AUM).** Muhammadiyah's operational institutions schools, hospitals, and universities that function as social enterprises. Many AUMs are funded by productive waqf, linking charitable intent with economic sustainability.
- Attitude Toward Use (ATU).** A psychological construct denoting a user's positive or negative feelings toward using waqf management technology. In TAM, attitude strongly influences the behavioral intention to adopt and continue using technological systems.
- Behavioral Intention.** Represents the extent to which individuals intend to perform a behavior in this case, to use waqf management technology. It is influenced by their attitudes, social pressures, and perceived behavioral control.
- Beneficiaries.** Those who derive social, educational, or economic benefits from waqf-funded activities. The well-being of beneficiaries is a key indicator of the success and legitimacy of waqf programs.

- Big Data Analytics.** Refers to computational techniques for analyzing large datasets to support decision-making. In waqf institutions, big data analytics enables better forecasting, monitoring of asset performance, and assessment of social impact.
- Board of Sharia Supervisors (DPS).** A group of Islamic scholars overseeing compliance with Sharia law in waqf operations. In Muhammadiyah, the DPS ensures that technological innovations and financial mechanisms remain within Islamic ethical boundaries.
- Cash Waqf.** A modern form of waqf involves monetary endowment. The capital is preserved while the returns from investment are allocated for social and religious welfare projects. It democratizes participation in waqf, allowing individuals from all economic levels to contribute.
- Cash Waqf Linked Sukuk (CWLS).** A hybrid Islamic financial instrument that channels waqf funds into sukuk investments. CWLS bridges philanthropy and capital markets, allowing the proceeds to fund long-term social infrastructure.
- Cash Waqf Linked Deposit (CWLD).** A waqf-based investment model that integrates the concept of *cash waqf* with Islamic banking deposit instruments. In this model, the cash endowed by the *waqif* is deposited in a Sharia-compliant account within an Islamic financial institution.
- Centralized Waqf System.** A governance framework in which the authority and administration of waqf assets are organized under a single, centralized institution or governing body. This system allows for uniform policy formulation, standardized procedures, and coordinated decision-making across multiple levels of the organization.
- Council for Economy, Business, and Tourism.** A specialized body within Muhammadiyah tasked with developing strategic initiatives in the fields of economic empowerment, business innovation, and Islamic-based tourism. The Council formulates and implements policies to strengthen Muhammadiyah's economic independence through productive waqf, entrepreneurship, and investment programs that adhere to Sharia principles.
- Council for Religious Opinion and Tajdid.** A central council within the Muhammadiyah organization responsible for formulating religious opinions (*fatwas*), interpreting Islamic jurisprudence (*fiqh*), and guiding the renewal (*tajdid*) of religious understanding in accordance with contemporary developments.
- Council for Waqf Utilization.** An official body in Muhammadiyah responsible for formulating policies, supervising implementation, and fostering innovation in waqf management. It plays a strategic role in digital transformation and socio-business integration.
- Crowdfunding Waqf Model.** An online model enabling collective contributions to waqf projects through digital platforms. It leverages public participation and transparency to enhance waqf's reach and inclusiveness.
- Decentralized Waqf System.** A governance model allowing regional or local Muhammadiyah units to manage waqf assets independently under general central oversight. It encourages efficiency, innovation, and contextual responsiveness.
- Diffusion of Innovation.** A sociological theory explaining how innovations spread across individuals or organizations. In this research, it clarifies how waqf digitalization gains acceptance among Muhammadiyah stakeholders.

Digital Social Business Waqf Model (DSB-WM). A conceptual model proposed in this study that integrates digital technology, social-business logic, and financial sustainability within waqf ecosystem.

Ease of Use. Refers to the perception that technology is user-friendly and does not require excessive effort. It is one of the two key factors determining technology acceptance in TAM.

Ethical Governance. Governance principles rooted in Islamic ethics emphasizing integrity, justice, and transparency. Ethical governance ensures legitimacy and trust in waqf management.

Fiqh al-Waqf. The Islamic legal framework that governs the establishment, management, and distribution of waqf assets. It ensures adherence to Sharia principles across all operational aspects.

Financial Sustainability. The ability of a waqf institution to maintain financial independence and continuity through productive investment and sound fiscal management.

Governance. The process of decision-making and the mechanisms used to implement them. Effective waqf governance ensures accountability, compliance, and alignment with Sharia and institutional goals.

Human Capital Theory: An economic theory suggesting that education and training are key investments in improving institutional performance. Applied to waqf, it emphasizes developing competent, ethical, and tech-savvy human resources.

Intention to Use. A predictor of actual technology usage behavior. It reflects the user's motivation and readiness to adopt digital waqf systems.

Legitimacy. The general perception that an organization's actions are desirable, proper, or appropriate according to socially constructed systems of norms and beliefs. In waqf, legitimacy links religious authenticity with technological credibility.

Majelis Tarjih dan Tajdid. A Muhammadiyah council that formulates legal opinions and guidelines to ensure religious legitimacy in waqf innovation and technology adoption.

Maqasid al-Shariah. The higher objectives of Islamic law designed to protect religion, life, intellect, lineage, and property. All waqf activities must align with these principles to uphold Sharia integrity.

Muhammadiyah. An Islamic reform organization in Indonesia known for its vast network of social, educational, and healthcare institutions. Muhammadiyah's waqf management integrates modern governance with Islamic ethics.

Mutawalli. The trustee or manager appointed to administer waqf assets in line with Sharia and the donor's directives.

Nazir. The individual or organization legally responsible for managing waqf assets, ensuring Sharia compliance, and optimizing their benefits.

Perceived Behavioral Control. Represents an individual's belief in their ability to perform a behavior in this study, to use waqf technology effectively despite potential constraints.

Perceived Ease of Use. The belief that using a particular technology requires minimal effort, making it a determinant of acceptance within the TAM framework.

Perceived Usefulness. The degree to which an individual believes that using a particular system enhances their performance or productivity in waqf management.

Productive Waqf. A form of waqf that generates income through commercial activities, with profits used to fund social and religious initiatives. It embodies the principle of sustainable philanthropy.

Sharia Governance. A regulatory and ethical framework ensuring that all waqf operations comply with Islamic principles and are monitored by qualified Sharia scholars.

SIMAM. Muhammadiyah Asset Management Information System. A digital database platform developed to record, monitor, and manage Muhammadiyah's assets, supporting transparency and accountability in waqf administration.

Social-Business Integration. The process of harmonizing social objectives with business mechanisms to achieve sustainable impact and financial viability in waqf projects.

Technology Acceptance Model (TAM). A theoretical framework explaining user acceptance of technology based on perceived usefulness and perceived ease of use.

Transparency. The openness and clarity with which an institution communicates information about its operations, finances, and performance to stakeholders.

Trust. The confidence that donors, beneficiaries, and the public place in waqf managers and digital systems, grounded in ethical conduct and reliability.

Waqf. An Islamic endowment of property or funds for religious, educational, or social purposes, where the corpus remains intact and the benefits are perpetually distributed.

Waqif. The donor or founder of a waqf who dedicates assets in perpetuity for charitable purposes as an act of devotion to Allah.

Zakat, Infaq, and Sadaqah (ZIS). Islamic instruments of wealth distribution complementing waqf in achieving social justice and poverty alleviation.

Zero-Based Transparency. A principle advocating complete openness in all stages of waqf operations from planning to execution ensuring that every stakeholder has access to information.

INDEX

Accountability, 52, 63, 95, 142, 213, 251
Actual Use of Technology (AUT), 218, 223, 226, 243
Adoption of Technology, 108, 170, 182, 231, 243
Ahmad Dahlan, Kyai Haji, 83, 84, 88
Amal Usaha Muhammadiyah (AUM), 83, 95, 173, 186, 246
Attitude Towards Use (ATU), 119, 214, 223
Behavioral Control, Perceived (PBC), 112, 214, 219, 229, 247
Blockchain in Waqf Management, 51, 55, 59, 63, 170, 247
Business Integration, 57, 58, 61, 186, 243
Business Models, Islamic Social, 59, 61, 186
Cash Waqf, 20, 44, 59, 63, 186, 247
Central Board of Muhammadiyah (PP Muhammadiyah), 83, 141, 145, 169
Conceptual Framework, 69, 76, 77, 214, 255
Corporate Waqf, 61, 66, 247
Crowdfunding, 48, 59, 63, 170, 247
Data Analysis (PLS-SEM), 129, 132, 216, 218, 223
Decentralized Administration of Waqf, 25, 83, 88, 153
Digitalization of Waqf, 17, 46, 51, 145, 169
Digital Socio-Business Waqf Model (DSB-WM), 170, 174, 209, 243, 247
Diffusion of Innovation (DOI), 48, 69, 214, 243
Donor (Waqif), 18, 29, 65, 95, 214
Economic Empowerment through Waqf, 59, 95, 97, 243
Education and Health Institutions, 95, 97, 186, 245
Efficiency in Waqf Management, 24, 42, 44, 145, 213
Ethical Governance (Shariah), 52, 59, 145, 173, 250
Fatwas on Waqf Management, 55, 63, 173, 251
Financial Sustainability, 35, 58, 97, 186, 243, 251
Fiqh of Waqf, 18, 52, 83, 141, 214
Framework, Conceptual, 69, 76, 77, 255
Governance, Shariah, 52, 53, 59, 69, 142, 173, 250
Governance Structure, Muhammadiyah, 88, 135, 137, 142, 145
Human Capital in Waqf Institutions, 53, 108, 214, 245
Hybrid Waqf Model, 33, 37, 186, 243
IIUM Institute of Islamic Banking and Finance, i, vii
Integration, Social-Business, 57, 59, 61, 186, 243
Innovation in Waqf Management, 44, 59, 63, 145, 186, 196
Intention to Use (IU), 119, 214, 223, 226, 243
Islamic Governance Principles, 53, 55, 59, 251
Juristic Perspectives on Waqf, 18, 20, 52
Kyai Haji Ahmad Dahlan, 83, 84, 88
Legitimacy (Concept of), 52, 69, 145, 169, 170, 243
Legitimacy Theory, 52, 69, 173, 243, 250
Literacy in Waqf (Waqf Awareness), 186, 247, 252
Majelis Pendayagunaan Wakaf Muhammadiyah, 135, 141, 145, 153, 169, 173
Majelis Tarjih dan Tajdid, 52, 55, 173
Management Information System (MIS), 46, 47, 132, 145, 169
Muhammadiyah Organization, 83, 84, 135, 141, 145, 170
Musharakah / Social Partnership, 61, 186

Nazir (Waqf Manager), 24, 29, 53, 86, 142, 173, 214, 245
 Non-Profit Organization Theory, 69, 173, 250
 Organizational Structure of Muhammadiyah Waqf, 88, 137, 141, 145
 Outcomes and Impact of Waqf, 36, 95, 97, 243
 Perceived Behavioral Control (PBC), 214, 219, 229, 243
 Perceived Ease of Use (PEOU), 214, 219, 231, 243
 Perceived Usefulness (PU), 214, 219, 233, 243
 Performance of Waqf Institutions, 29, 33, 35, 95, 243
 Policy Implementation in Waqf, 135, 142, 145, 153, 169
 Productive Waqf, 29, 44, 59, 61, 95, 97
 Public-Private Partnership in Waqf, 61, 63, 186
 Quantitative Analysis (PLS-SEM), 132, 214, 216, 218, 223, 243
 Questionnaire Variables, Appendix A, 305–308
 Research Design, 110, 112, 115, 119
 Respondent Demographics, 216
 Risk and Challenges in Digital Waqf, 160, 191, 196
 Role of Technology in Waqf, 46, 47, 51, 170, 182
 Shariah Compliance in Waqf, 52, 55, 145, 173, 251
 SIMAM (Muhammadiyah Asset Management Information System), 1, 3, 4, 135, 143
 Social-Business Waqf Model, 170, 186, 243
 Stakeholder Theory, 33, 69, 173, 250
 Subjective Norms (SN), 214, 219, 235, 243
 Sustainability of Waqf, 35, 59, 97, 173, 243
 Table of Findings, 219–226, 243–247
 Technology Adoption, 47, 48, 51, 169, 182, 214
 Technology Legitimacy (TL), 214, 219, 237, 243
 Theory of Planned Behavior (TPB), 48, 69, 214
 Training and Human Capacity Development, 186, 252
 Transparency, 52, 63, 145, 213, 251
 Use of Technology in Waqf, 46, 47, 170, 182, 214, 223
 Utility and Efficiency of Digital Waqf, 29, 44, 145, 213
 Value Creation through Waqf, 59, 61, 186
 Vision of Muhammadiyah Waqf, 83, 145, 169, 245
 Waqf Definition, 14, 17, 18, 20
 Waqf Governance, 52, 59, 145, 169, 173
 Waqf Institution in Indonesia, 64, 65, 66
 Waqf Management Technology, 46, 48, 145, 169, 170
 Waqf Performance Indicators, 29, 35, 95, 243
 Waqif (Donor), 18, 29, 83, 95, 214
 Yunus, Muhammad (Social Business Theory), 58, 59, 186, 243