

“Enlightening Madani’s Principle
in Islamic Science”

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PREFACE

The **International Seminar on Islam and Science** (SAIS 2024) is jointly organized by Persatuan Kakitangan Akademik Universiti Sains Islam Malaysia (PKAUSIM), Faculty of Major Language Studies (FPBU), Islamic Science Institute (ISI) and the Institute of Fatwa and Halal (iFFAH), USIM. The theme of this year seminar is **“Driving Madani’s Principles in Islamic Science”**.

The Seminar provides a platform for dialogue and discussions between academicians, researchers, and graduate students to address current issues, challenges and opportunities across fields and industries.

All presenters involved are cordially invited to share knowledge and expertise by presenting their valuable findings in the conference which is held on 26th September, 2024.

SAIS 2024 Committee

FOREWORD OF THE PRESIDENT PKAUSIM AND PROGRAMME DIRECTOR



PROFESSOR DR. AZMAN AB RAHMAN
PRESIDENT,
PERSATUAN KAKITANGAN AKADEMIK
UNIVERSITI SAINS ISLAM
(PKAUSIM)
&
DIRECTOR,
SEMINAR ANTARABANGSA ISLAM DAN SAINS
(SAIS 2023)

Assalamu'alaikum warahmatullah wabarakatuh

Praise to Allah for His blessings, the **Seminar Antarabangsa Islam dan Sains (SAIS 2024)** has been successfully organized. Islam and Science presents an articulate and concise historical introduction to intellectual developments that have shaped Islamic civilization, both religious and scientific. The seminar which is jointly organized by Persatuan Kakitangan Akademik Universiti Sains Islam Malaysia (PKAUSIM), Faculty of Major Language Studies (FPBU), Islamic Science Institute (ISI) and the Institute of Fatwa and Halal (iFFAH), USIM. The seminar is held as a platform to exchange ideas, thoughts and knowledges regarding the current issues which relate to Islam and science globally.

The seminar themed “**Driving Madani’s Principles in Islamic Science**” is very much reflecting the issue and current needs in supporting the government’s initiatives i.e., *Malaysia Madani*. The sharing session by the keynote speakers renowned in their respective field, is yet another hallmark of this seminar.

The success of the seminar is the result of the high commitment and dedication of the committee members, university, academic staff, and not forgetting the authors, presenters and participants who have given their best through participation in SAIS 2024.

Jazakumullahu khayran kathira.

TABLE OF CONTENTS

Preface	iii
Foreword of the President of USIM Academic Staff Association (PKAUSIM)	iv
Table of Contents	v

NO.	TITLE	AUTHOR	PAGE
BI02	Legal Risks Identification and Treatment for Bomb Threat and Evacuation Crisis: A Case Study on a Private Hospital in Malaysia	Rabihah Md Sum	1-25
BI03	Conceptual Framework of Risk Communication Strategy for Telecommunication Sector	Zurina Zolkafly & Rabihah Md. Sum	26-47
BI04	From Dirty, Dangerous and Difficult to Diligence, Dignity and Duty: A Way Forward to Rebrand 3d Sectors	Nisar Mohammad Ahmad & Dina Imam Supaat ⁱ	48-61
BI06	Physiochemical And Sensory Acceptance of Catfish-Based Keropok Lekor Added with Oyster Mushroom	Nur Addilah Binti Ali, Norlelawati Arifin & Noor Khalidah Abdul Hamid	62-71
BI08	Misrepresentation of Hadith Interpretation in Content Broadcasting on Social Media: A YouTube Study	Nurul Nasuhah Razali & Mesbahul Hoque Chowdury	72-87
BI09	Implementation And Impact of Socio- Economic Programs: A Case Study Among Students at The Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia (USIM)	Mohammad Noorizzuddin Nooh, Anita Ismail & Umi Hamidaton Mohd Soffian Lee	88-103
BI10	The Importance of ESG Practices Among Muslim SMEs in Malaysia: A Critical Literature Review	Mohammad Noorizzuddin Nooh	104-112
BI11	Enhancing SME Sustainability in Malaysia's ICT Sector: Challenges and Strategies	Razana Nawawi, Hadijah Iberahim & Amar Lokman	113-124

BI12	Factors Affecting the Teaching Performance of Mandarin Lecturers in Malaysian Local Universities: A Quantitative Study	Yee Chin Yip, Nurhasma Muhamad Saad, Wan Moharani Mohammad, Nurul Ain Chua & Ng Siew Yin	125-150
B13	Prejudice Faced by Muslims in The West: Experiences, Counseling and Social Justice	Mohd Khairul Anuar bin Rahimi	151-155
BI14	Aligning Negotiation Goals with The Madani Framework: A Powerful Approach to Resolving Industrial Disputes	Norman Zakiyy, Noor Dzuhaidah Osman & Alifah Hj Hamid.	156-164
BI15	A Conceptual Study of Madani Concept in Islamic Business Ethics and Marketing Practices	Intan Fatimah Anwar, Elisya Sopphilea Kamal Baharin, Wan Rasyidah Wan Nawan, Nor Haziah Hashim & Siti Nurulhuda Nordin	165-175
BI16	The Implementation of Muslim-Friendly Standard, <i>Maqasid Shariah</i> and Madani Principles: A Preliminary Empirical Survey	Hartini Mohammad	176-188
BI17	Mirror on the Wall: Which Form of Corporate Hedging Actually Matters in Malaysia of All?	Wan Nurhanan Wan Suhaimi & Najwa Najib	189-208
BI18	Content Analysis of Facebook Engagement in Malaysian Ministry	Muhamad Zaki Mustafa, Muhammad Raqib Mohd Sofian, Safiyyah Ahmad Sabri, Mohd Yahya Mohd Ariffin & Mohd Faizal Kasmani	209-222
BI19	Beyond Empiricism: Unveiling The Gap of The Moral and Spiritual Dimensions of Modern Western Science	Mohd Rushdan Mohd Jailani & Wan Muhammad Shafiq Wan Abdul Rahim	223-235

BI20	Exploring The Verb "أخذ" In Arabic Idiomatic Phrases	Wahida Mansor, Lubna Abd. Rahman, Arnida A. Bakar, Azni Mohamed Zain & Zulkipli Md. Isa	236-243
BI21	Analysing The Effect f Settlement Agreement In Claiming Liquidated Ascertained Damages By House Buyers	Kamilah Wati Mohd	244-252
BI22	A Conceptual Study On The Intention To Use Financial Robo-Advors For Islamic Financial Products: Empowering Madani Economy	Nor Haziah Hashim, Wan Rasyidah Wan Nawang, & Intan Fatimah Anwar	253-261
BI23	Bursa Malaysia Stock Liquidity	Siti Sarah Azman & Norlida Mahussin	262-273
BI24	Evaluating The Effectiveness Of Islamic Psycho-Spiritual Therapy For Trans Women At Pertubuhan Usrah Fitrah: A Strengths And Weaknesses Perspective	Wan Fatimah Zahra Wan Yusoff, Mohd Zohdi Mohd Amin & Norzulaili Mohd Ghazali	274-292
BI25	Interactive Learning Experience Through Sulam Project by Integrating Sustainable Environment Activities with Inaq	Hatika Kaco, Mohd Hafiz Abu Hassan, Khairunneezam Mohd Noor, Najwa Hayaati Mohd Alwi, Siti Sallah Othman & Siti Nazurah Md Jusoh	293-308
BI26	Exploring Sunnah-Based Culinary Practices: A Preliminary Study For The Sunnah Kitchen Web Application	Nur Ilyana Ismarau Tajuddin, Nur Farah Amirah Rizal, Nurafifah Mohd Nor, Nur Amlyya Abd Majid, Muhammad Nuruddin Sudin, Maizatul Farisah Mohd Mokhtar, Norrlaili Shapiee & Nur Idayu Ah Khaliludin	309-326

BI27	A Study on Propensity to Indebtedness Among Young Working Malays in Malaysia: The Moderating Role of Religiosity	Mahdhir Abdullah	327-332
BI28	A Case Study of Iot-Based Biofiltration Green Panel (Ibgp) For Improving Indoor Air Quality	Madiah Mat Idris, Elina Mohd Husini, Nurul Najwa Nasir, Nurul Husna Mohd Azmi, Fatin Aisyah Nor Azlan Shah, Nurhanisah Izzati Md Ariffin	333-349
BI29	Rethinking Zakat Institutions' Support: A Case Study in Terengganu, Malaysia	Hashim Ahmad Shiyuti, Fakhrul Anwar Zainol, Alifah Hj Hamid, Nur Amlyah Binti Abd Majid & Aida Zairina Ishak	350-361
BI30	Preliminary Study On The Presence of Microplastics In Sediment Taken From Sungai Batang Benar, Nilai	Musa Ahmad, Muhammad Naqib Mohd Ruslan, Muhammad Syafiq Musa & Syaza Azahari.	362-369
BI31	Integrating Islamic Accounting Principles in Financial Accounting Curricula for Pre-University Students	Alifah Hj Hamid Hashim Ahmad Shiyuti & Norman Zakiyy	370-381
BI32	Validity And Reliability Of Islamic Psychospiritual Self-Care Module To Enhance Well-Being Amongst Undergraduates	Fathiah Shamsuddin, Siti Nubailah Mohd. Yusof, Nurhafizah Mohd. Sukor	382-396
BI33	Factors Affecting The Poverty Level In Developed And Developing Countries	Nur Syahidah Mohd Sidek & Noor 'Adilah Ibrahim	397-414

BI35	Examining The Impact Of Gender On Arabic Language Anxiety	Wan Muhammad Shaker Wan Adnan, Azlan Shaiful Baharum & Mohd Nizwan Musling	415-421
BI36	Design And Implementation of A Genetic Algorithm-Based Block Cipher For Enhanced Cryptographic Security	Nur Hafiza Zakaria, Farida Hazwani Mohd Ridzuan & Azni Haslizan Ab Halim	422-427
BI37	The Structural Studies of Lawsonia in Henna: The First Principle Approach	Ahmad Nazrul Rosli	428-434
BI38	Overview Of The Different Halal Certification Scheme In Malaysia	Ainil Hawa Mohamad Fauzi, Dzulfadli Rosli, Mohd Sukri Hassan & Mohd Fared Abdul Khir	435-445
BI40	Determinants Of Residential Property Price in Malaysia	Wan Farhanim W Abdullah & Muhammad Zaim Razak	446-459
BI41	Exploring Green Chemistry via Quantum Mechanical Simulations of Enzymatic Reaction Mechanisms	Muhammad Qadri Effendy Mubarak	460-467
BI43	Students Perception Towards I-Stams: Web Based Task Management System With Inaq For Students In Universiti Sains Islam Malaysia	Halimatun Sa'adiah Ariffin, Aiza Azrin bt Mohd Zain, Muhammad Izuddin Norkas Purahman, Nur Sabrina Mohd Shukri	468-479

BI44	Interactive Learning Experience Through SULAM Project by Integrating Sustainable Environment Activities with INAQ.	Hatika Kaco, Mohd Hafiz Abu Hassan, Khairunneezam Mohd Noor, Najwa Hayaati Mohd Alwi, Siti Salhah Othman & Siti Nazurah Md Jusoh	480-496
BI46	Sustainable Food Product Development Using Fruit Seeds: A Halalan Thayyiban Perspective from Rubber, Lychee, And Sacha Inchi	Mansor Syamila, Siti Nurraihan Azli Zulhasanain, Nurin Aireen Adlina Hamdan, Sa'iedatul Najihah Azman & Ismatul Nurul Asyikin	497-505
EA02	Exploring the Surplus Sharing Mechanism in Takaful Towards Better Market Transparency.	Md Azmi Abu Bakar & Nuradli Ridzwan Shah Mohd Dali	506-511
EA03	Exploring Green Chemistry via Quantum Mechanical Simulations of Enzymatic Reaction Mechanisms.	Muhammad Qadri Effendy bin Mubarak	512-517
EA04	Menu Rahmah Purchase Intention among University Students: Madani Economy Empowerment.	Wan Rasyidah Wan Nawang, Amirul Amri Zainudin, Intan Fatimah Anwar & Nor Haziah Hashim	518-523
EA05	The Role of AI in Shaping Public Perception: Ethical and Social Implications of AI-Generated Content.	Noor Adzrah Ramle & Safiyyah Ahmad Sabri	524-526
EA07	Comparative Analysis of S&P 500 Shariah and Bursa Malaysia Hijrah Shariah Index.	Hamdi Hakeim Mudasir & Nuradli Ridzwan Shah Mohd Dali	527-530
EA08	The Performance of S&P 500 Shariah and Bursa Malaysia Emas Shariah Index Post COVID-19 Pandemic.	Hamdi Hakeim Mudasir & Nuradli Ridzwan Shah Mohd Dali	531-533

EA09	Co-Takaful and Islamic Syndicated Financing: A Blend Between Islamic and Conventional Finance.	Nur I'ffah Muhammad Nasir & Azmuddin Razali	534-537
EA13	Single Mode Fiber Based SPR Sensor for the Detection of Air Contaminants.	M. Nashahar, M. Othman, M.F. Mohd Fadhir, N. M. Razali, A. Thayalan, K.N.Z. Ariffin & F.M. Mohd Shuib	538-542
EA15	Media Freedom in Reporting on Race, Culture and Religion in Malaysia.	Safiyyah Ahmad Sabri, Noor Adzrah Ramle, Muhammad Raqib Mohd Sofian & Muhamad Zaki Mustafa	543-546
EA17	Addressing Digital Addiction: Technology-Based Solutions for Risk Mitigation.	Hanifah Abdul Hamid & Nuradli Ridzwan Shah Mohd Dali	547-550
EA18	Understanding Digital Addiction in Financial Trading.	Nuradli Ridzwan Shah Mohd Dali & Hanifah Abdul Hamid	551-553
EA17	Strategic Diversification of Facility Management Services in Malaysia's Construction Industry: A Case Study.	Rosnia Masruki, Marini Kasim, Nazahah Abd. Rahim & Faizahani Ab. Rahman	554-559
EA18	The Level of Financial Literacy among Islamic Study Undergraduate Students.	Norlida Mahussin & Ahmad Amiruddin Rosman	560-564
EA24	Empowering Muslim Women in Modern Society Through the Integration of Spiritual Intelligence and Artificial Intelligence.	Nur Saadah Hamisan @ Khair	565-569
EA25	SULAM Nature Appreciation Module: Science and the Quran in Harmony.	Mohd Hafiz Abu Hassan, Hatika Kaco & Faszly Rahim	570-574

EA26	Fostering Financial Literacy among Students: An INAQ Gamified Approach.	Muhammad Nuruddin bin Sudin, Nur Amlyia binti Abd Majid & Hashim bin Ahmad Shuyuti	575-579
EA29	Quranic Education for Autistic Children in Malaysia.	Yuslina Mohamed & Raudhah Nurdin Muhammad	580-582
EA36	Family Justice Redefined: Upholding the Child's Right to be Heard in Custody Dispute.	Asmidah binti Ahmad, Aldamier bin Hadjikain & Noor Aziah binti Mohd Awal	583-586
EA37	Unlocking The Potential of Durian's Seeds: Sugar and Lignin Determination.	Esmalinda Mohamad & Latiffah Karim	587-591
BI46	The Integration of the Employee Assistance Programme with Islamic Principles: A Qualitative Study at the Department of Islamic Development Malaysia (JAKIM), Putrajaya	Khairunneezam Mohd Noor, Wan Mohd Fazrul Azdi Wan Razali, Norhayati Rafida Abdul Rahim, Mohamad Isa Amat, Muhammad Khairi Mahyuddin & Mohamad Humaidi bin Zakiyudin	592-614
BI47	Steering Towards Takaful: What Drives USIM Students to Choose Takaful?	Junaidah Abu Seman, Isma' Ilias, Shafiqal Iylia Azeman, Wan Nur Solehah Wan Shariff, Muhammmad Fadhlun Mursyidi Qamarul Arifin & Muhammad Nurnadzem Ahmad Khairuddin	615-628
BI45	Globalizing Cyber Hasanat: Cultivating Digital Literacy and Ethical Responsibility.	Sakinah Ali Pitchay, Farida Ridzuan, Azni Haslizan Ab Halim & Najwa Hayaati Mohd Alwi	629-638

BI48	Crptolearn: AI-Driven Adaptive Cryptography Learning.	Azni Haslizan Ab Halim, Farida Ridzuan, Najwa Hayaati Mohd Alwi, Sakinah Ali Pitchay & Shah Muhammad Ash-Syafiq Shahril	639-648
BI07	Exploring the Addiction Behavior in Individuals with Psychopathic Traits.	Farhana Sabri & Khairon Zainee Basiron	949-656

LEGAL RISKS IDENTIFICATION AND TREATMENT FOR BOMB THREAT AND EVACUATION CRISIS: A CASE STUDY ON A PRIVATE HOSPITAL IN MALAYSIA

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Abstract

This study investigates legal risks faced by private hospitals during crises of bomb threat and evacuation. It identified legal risks, and current risk mitigations implemented by the hospital to manage the risks and proposed additional risk mitigations. Although hospitals rarely receive bomb threats, the process of evacuating and transferring patients exposes the hospitals to legal risks. This study used the ISO 31022:2020 risk management guidelines for the management of legal risk. The unit of investigation was a private specialist hospital in Seremban, Negeri Sembilan. To obtain information on risks and current and proposed legal risk mitigation strategies, the study interviewed the following professionals: Risk Officer, Assistant Superintendent of Police, Commander of Bomb Disposal Unit, Deputy Fire Superintendent, Commander of Hazardous Material Team and Session Court Judge. The legal risks are failure to provide a safe escape route during an emergency; danger or damage caused by unusual danger or risk, occupier's liability claims for criminal acts of third parties; failure of the employer to provide a sufficiently safe system of work to the employee; failure to attend to and treat a non-patient in the emergency; breach of duty of care; failure to gather evidence as per evidence collection method, failure to provide safe temporary shelter to patients and victims, leak of patient medical information during patient transfer. Current and proposed legal risk mitigation strategies are adequate power supply backup and CCTV recording storage during a crisis, evacuation guidelines for safe escape routes, adequate training especially when moving patients during a crisis, creating a good routine system for evidence gathering, person producing the evidence must testify in court, use fire alarm panel to notify the premise owner on the current situation in the building and hospitals emergency respond team must undergo training with Bomb Disposal Unit (BDU) of Royal Malaysian Police and Hazardous Material Team (HAZMAT).

Keywords: legal risks, legal risk mitigation, bomb threat, hospital evacuation, crisis management, sustainability risk management

INTRODUCTION

The objective of this study is to explore legal risks faced by private hospitals during a crisis. The focus is on the crisis of bomb threat and evacuation. The study investigates legal risks faced by the hospital. Further, it also explores current risk treatments implemented by the hospital and proposes additional risk mitigations to manage the risks. The results of the study can be used by

government agencies and private hospitals as inputs for their risk management policies and implementation of legal risk management during crises.

Hospitals were soft targets for terrorism and criminal activity (Ganor & Wernli, 2013; Glasberg et al., 2014). Other soft targets were schools, sporting arenas, amusement parks, and theatres. However, hospitals have relatively unique vulnerabilities. Unlike other soft targets, hospital patients were sick or disabled, unable to ambulate, and difficult to evacuate from a dangerous situation (Finucane, 2018). Hence, hospitals were easy targets. As it was simple to spread panic, which is what terrorists primarily aim to accomplish (Gabriella, 2020).

Terrorist organizations considered hospitals to be an alluring secondary target for attack. As a secondary target, an attack on a hospital can divert security and response personnel away from the primary target of attack. Hindering the removal and treatment of the injured from the primary site of attack. For instance, a bomb planted inside a hospital or a suicide bomber blowing himself up at the entrance to a hospital will make it difficult for emergency rescue teams to transport the injured from the scene of a primary terrorist attack to the emergency room. As a result, the primary attack suffers large damage because valuable time is lost.

Furthermore, hospitals are open to the general public, visitors, and guests, making comprehensive security management difficult to implement (Jenkins & Affairs, 2009). Hospital employees were not trained and infrastructure was not prepared for terrorist attacks exacerbated the difficulties. Making hospitals the focus of soft-target terrorist attacks.

Terrorist attacks on hospitals resulted in large number of fatalities. Ganor & Wernli, (2013) reported fifty-five out of 103 terrorist attacks on hospitals between 1981 and 2013 involved fatalities. Nineteen of the attacks resulted in the death of more than ten people. The study investigated terrorist attacks on hospitals in 42 nations on all continents. The result, approximately 775 individuals were killed and 1,217 others were injured. Explosive-based terrorist attacks on hospitals were prevalent during the period. The explosion events included 45 assaults consisting of 27 bombings, 10 suicide bombings, and eight car bombings.

BOMB THREATS

Explosion is one of the most commonly used terror weapons because it causes widespread panic, has a large, spectacular impact, and is difficult to prevent. A

bomb threat is a communication to anyone stating that a bomb or other harmful device has been or will be placed (Sapp, Huff, Kelm, & Tunkel, 2001). In addition, a bomb threat is a threat that a bomb is present or that the target will be destroyed by a bomb (Newman, 2011). This is a simple crime to carry out, as the offender usually sends threats to the target while remaining hidden.

Within the literature, there are studies on bomb threat and its impact. Barrera (2017) investigates bomb threats in Philippines. The author concluded that bomb threat targets are not always the result of security lapses, rather it is of criminals' preferences. Bomb threats generally require an evacuation process. Therefore, if a bomb threat incident takes place in a hospital, proper evacuation process must be made.

A good overview of earlier work in hospital evacuation process has been carry on by Wabo, Örténwall, & Khorram-Manesh (2013). This study used risk and vulnerability analysis at two county hospitals in conjunction with a systematic search of the online internet literature. The two hospitals involve in this study are situated in the Region of Vastra Gotland, Sweden. The hospitals are Lidköping Hospital and Kungälv Hospital. The findings of this study stated that the decision to evacuate a hospital is difficult to make. Nevertheless. it should be made without hesitation if anything compromises the safety of patients. The decision to evacuate includes evacuation routes, transportation, and priorities. The infrastructure of the hospitals, such as backup systems and external space, and rooms, determines their risk profile and, the necessity for an evacuation process.

MANAGING CRISIS

Based on the hospital report (KPJ, 2018b), a Disaster and Emergency Management Plan (DEMP) was developed after the bomb threat incident. DEMP outlines how a facility should react to and recover from all perils. According to the hospital's policy, all staff members must receive training and participate in exercises for emergencies to become familiar with DEMP. Once a year, disaster exercises will be held to test and assess the DEMP. For DEMP, the colour code use are Code Red (Fire Incident) and Code Black (bomb threat incident).

Another guidance for managing Crisis, Disaster and Emergency in hospitals has been published by the California Emergency Medical Services Authority (EMSA). EMSA has produced guidelines titled Hospital Incident Command System (HICS) (Authority, 2014). HICS is an incident management system based on the Incident Command System (ICS) which can be used to

improve emergency management planning, response, and recovery capabilities for both scheduled and unexpected incidents. HICS adheres to the same concepts as ICS and the National Incident Management System (NIMS) which has been widely used in United States of America. HICS also can be utilized by all hospitals regardless of their size, location, patient acuity, patient volume, or type of risk. HICS can assist in managing emergencies, whether the emergencies are external (for example, earthquakes, fires, or floods) or internal (for example, utility failure, child abduction, or workplace violence). HICS also provides Incident Planning Guide for Explosive Incident and Evacuation, Shelter-in-Place, and Hospital Abandonment. This Incident Planning Guide can be modified to meet the needs of hospitals according to their crisis management setting.

LITERATURE REVIEW

Definition of Legal Risk

According to Moorhead & Vaughan (2015), legal risk is critical legal repercussion that originated from actions attributable to the organization activity. The impact of legal risks can extend to the risk of being prosecuted and legal claim for compensation of loss to the aggrieved party. Legal risk is risks associated with a faulty transaction, a claim being brought (including a defense to a claim or a counterclaim), or some other legal events resulting in a liability or other loss, or a failure to take adequate actions to meet legal or regulatory obligations or safeguard assets (for example, intellectual property) (Ripley, 2020). The legal risk defined by The International Standards Organization (ISO) in the ISO31022:2020 guideline for the management of legal risk (Standardization, 2020), stated legal risks as related to legal, regulatory and contractual matters, and from non-contractual rights and obligations.

Sources of Legal Risk

Legal risks can arise from non-contractual obligations. The organization's behaviour and decision-making result in illegal behaviour or a failure in non-legislative duty of care (or civil duty) to third parties. The legal risks also include tortious duty. Therefore, it can be stated that legal risks originated from organization's behaviour and decision-making. The legal risk is the illegal behaviour or a failure in non-legislative duty of care (or civil duty) to third parties which also include tortious duty.

Legal Risks in Hospitals

Park et al., (2016) found that the overall quality of services in healthcare facilities across Korea should be upgraded. A proactive approach to legal risks at the healthcare facilities level, including medical care systems, could minimize

losses arising from a medical dispute in hospitals. In addition, inefficient practices and risk factors should be eliminated in management services. The findings of the study serve as a detailed reference point for identifying and mitigating medical malpractice, establishing responsive strategies to incidents, developing an incident report framework and enforcement actions. These were used to deter potential legal disputes in the health. However, the study is limited to legal risks in the normal operation of the hospital. The study did consider legal risks in the crisis situation such as bomb threat and evacuation process.

IDENTIFY LEGAL RISKS

Based on ISO 31022:2020, the identification process of legal risk involves two components. The first component is the tool or techniques to identify legal risks. The second component is the source of information on the legal risks.

Techniques to Identify Legal Risks.

1. Document analysis

Document analysis was a methodical method of examining or evaluating documents (Bowen, 2009). It was used to provide context, generate questions, enhance research data, track change over time, and verify information from other sources. Dalglish, Khalid, & McMahon (2020) introduced READ approach in document analysis technique. The READ technique was a systematic method for document analysis in health policy research. This technique encompassed of: (1) Ready the materials/document (2) Extracting the data (3) Analysing the data and (4) Distil the findings. The study applied the READ document analysis approaches via case studies method. The approach increased theoretical and empirical understanding of Pakistan and Nigeria health policy issues. The case studies in Pakistan and Nigeria demonstrated the importance of a thorough document analysis to comprehend the processes, discourse, and content of policies. Particularly, in situations that were not possible using other techniques. The READ approach also enhanced other risk identification techniques such as in-depth interviews and observations.

2. Legal Risk Identification Matrix (LRIM)

ISO 31022:2020 introduced the Legal Risk Identification Matrix (LRIM) for classifying identified legal risks and recording various types of events by business areas/units/activities. The LRIM connected legal risks with the operations of the company. LRIM grouped legal risks into six categories. The categories were Category 1 (Unpredictability); Category 2 (Noncompliance with applicable laws); Category 3 (Breach of contract);

Category 4 (Infringement of rights); Category 5 (Omission in exercising rights); and Category 6 (Improper choice). LRIM recorded the activities of agents, employees, contractors or individuals working for or with the company. Table 1 shows the LRIM template as proposed by ISO31022:2020.

Table 1: Example of LRIM

Parameter	Category 1	Category 2	Category 3	Category 4	Category 5	Category 6
Legal risk typologies	Unpredictability	Non-compliance with applicable laws	Breach of contract	Infringement of rights	Omission in exercising rights	Improper choice
Business activity 1						

SOURCE OF INFORMATION OF LEGAL RISKS

Legal risks encompass responsibilities and accountability for managing legal risk upon its occurrence. They may include criminal liabilities, administrative responsibilities, tort liabilities, regulatory fines, and compensation given to third parties. Legal risks fall under the application of specific laws, case law, and common law. Hence, several areas of law can be used as the source of information on legal risks. The source of information on the legal risks of bomb threat and evacuation covers two branches of law, Tort Law and Evidence Law (Civil Procedure).

Sources of Legal Risk from Tort Law

Talib (2016) stated a tort can consist of either misconduct or omission not allowed by law. In Malaysia, the law of torts is derived from three principal sources, English common law, local judicial decisions, and common law concepts established in local statutes. Furthermore, the law of tort covers areas such as Occupier's Liability, Medical Confidentiality, Medical Negligence and Employer's Liability.

1. Sources of Legal Risk from Occupier's Liability (Tort Law)

1.1 Failure to provide a safe escape route during an emergency.

The Occupier's liability refers to an occupier's or premise owner responsibility for harm caused to the visitors in his property (Pheng & Detta, 2018). The definition of premise has been decided by the court in the case of *Lau Tin Sye v Yusuf bin Muhammad* [1973] 2 MLJ 186. The case defined premise as all types of structures, and spaces. Including vehicles used to transport people, such as tractor. All types of structures refer to structural features such as scaffolding, ladders, walls, pylons, and grandstands. In the case of *Sri Inai (Pulau Pinang) Sdn Bhd. V. Yong Jit Swee & Ors* (2003) 1 MLJ

273, failure to provide safe escape route during emergency situation has imposed legal risk to the occupier. The failure has claimed the lives of four people and injured five during a fire incident. The court determined that Majlis Perbandaran Pulau Pinang (MPPP) and Sri Inai were both equally responsible for negligence and breach of statutory duty.

1.2 Danger or damage caused by unusual danger or risk

Danger or damage caused by unusual danger or risk incur legal risks to the occupier under Legally Authorized Entrants. In this situation, the person enters a place under legal authority, such as police officers, fire-fighters, meter readers, or health inspectors. In the case of *Shamsuddin v Yap Choh Teh & Anor* [1969] 1 MLJ 26, the police officers on duty at the quarry sustained an eye injury when a splinter from an explosion struck him. The contractor who was sued was held responsible by the court.

1.3 Occupier's Liability Claim for Criminal Acts of Third Parties

According to Tuck (2013), legal risks can be established when a defendant-occupier who can rationally anticipate that a plaintiff will suffer injury as a result of a criminal act and the defendant-occupier is capable to take action to avoid it, and yet doing nothing or commit omission. By referring to the case of *Al-Najar & Ors v The Cumberland Hotel* [2019] EWHC 1593 (QB), the court found the hotel or occupier was not liable for criminal injuries inflicted to the guests by the intruder or third party. The lawsuit was rejected by the court because the hotel did not fail to fulfil its duty of care to the plaintiff.

1.4 The failure of the employer to provide a sufficiently safe system of work to the employee

In employer-employee relationship, the employer has the duty to always protect the employees' safety at work (Aziz & Yusof, 2015). Duty of care exists in normal circumstances whereby if an employer does not take the usual degree of precaution, the employee or his property may be injured or damage. In the case of *Kanagasabapathy v Narsingham* [1979] 2 MLJ 69, the failure of the defendant-employer to provide a sufficiently safe system of work to the employee has initiated legal risk. As the employee sustained injury during work because of the dangerous circumstances, the court found defendant-employer was responsible.

2. Sources of Legal Risk from Medical Confidentiality and Negligence (Tort Law)

2.1 The Breach of Medical Confidentiality

For medical confidentiality, medical professionals cannot disclose information that were obtained throughout the course of their professional interactions with their patients. Including the information that was acquired outside of the course of their medical work (P. N. J. Kassim & Ramli, 2016). Breach of medical confidentiality will impose legal risk to the medical professional as they need to keep such sensitive information private and to utilise it only for the patient's benefit. The breach of medical confidentiality can be referred to the case of *Dr Tan Ah Ba v Dr Wong Foot Meow* [2012] 7 MLJ 467 HC. The court found the defendant-doctor liable for breach of his confidential obligation and contract breach by creating and disseminating the plaintiff-patient's medical report to other parties without the plaintiff's knowledge or permission.

2.2 Failure to attend to and treat a non-patient in the emergency situation

In an emergency situation, legal risks can arise to the medical practitioner if they failed to attend to and treat a non-patient. Non patient is define as an individual not listed on hospital records as an outpatient or who is not directly receiving hospital services (D. P. N. J. Kassim, 2010). In the case of *Lowns v Woods* (1996) Aust Torts Reports 81-376, the court held the defendant-doctor liable for negligence to attend a boy in an emergency. The doctor's negligent results in the boy suffering brain damage due to seizure.

3. Sources of Legal Risk from The Breach of Duty of Care (Tort Law)

3.1 The breach of duty of care

According to Hassan, (2015), an employee, owner, or employer has a duty of care not to cause injury to another person. Thus, legal obligation to act in a way that ensures the safety of others and to provide them with a reasonable degree of care is known as a duty of care. The breach of duty of care establishes legal risk to the person who act in improper way. In the case of *Abdul Aziz bin Awang @ Muhammad & Ors v Tenaga Nasional Bhd* [2020] 7 MLJ. The defendant's release of water from the Sultan Abu Bakar Dam (SABD) in the Cameron Highlands, Pahang has caused extensive damage to the plaintiffs' residences and the death of four people. The court held that the defendant committed negligence by failing to install real-time water level measurement equipment as the decision to release water from SABD was not supported by sufficient justification.

4. Sources of Legal Risk from Evidence Law

For the Evidence Law (Civil Procedure), legal risk can be found during admissibility of electronic evidence in court trial. In civil proceedings in Malaysia, The Evidence Act 1950 and Rules of Court 2012 are the most important statute to be referred in terms of evidence where both contain the mechanism of tendering the evidence for civil proceedings. Evidence means and includes all allegations, whether oral or written, which the court permits or needs witnesses to bring before it, concerning factual matters under investigation (Backer, 2012).

4.1 Failure to gather evidence as per evidence collection method

According to the general rule in the case of Ahmad Najib bin Aris v PP [2009] 2 MLJ 613, FC, computer-generated evidence can be submitted either by producing a certificate attesting to the device's normal working operation and course of ordinary use, or alternatively through direct oral testimony attesting to the same criteria. Mohamad, (2019) stated that the definition of computer evidence has three different terms which are computer printout, computer output and computer evidence. In the case of PP v Ong Cheng Heong [1998] 6 MLJ 678, the evidence was presented as computer printouts and the court refused to accept computer printouts as electronic evidence. The reasons, the person presented the printouts identified himself only as the supervisor of the vehicle registration department and made no claim of responsibility for the conduct of the activities for which the relevant computer was used. This court ruling portrayed the legal risk for not having proper evidence collection method.

METHODOLOGY

Unit of Investigation

This study was conducted in a private hospital in Seremban, Negeri Sembilan, Malaysia.

Respondents

Six respondents have been chosen as presented in Table 2. The six prospective respondents were chosen based on their prior experience in crisis management, specifically in the hospital. The criteria of the purposive respondents were

1. demonstrated or well-established competence in managing crisis in bomb threat and evacuation;
2. directly involved with the incident and they are involved in decision-making process;
3. experience in managing crisis;
4. consented to participate in this study either individual or group setting.

Table 2: List of Purposive Respondents

No.	Position	Department and Position
1.	Medical Director	Private Specialist Hospital Seremban
2.	Safety Manager and Incident Commander	Private Specialist Hospital Seremban
3.	Risk Officer	Private Specialist Hospital Seremban

This study also recruited expert respondents as presented in Table 3. The criteria for expert respondents were

1. experienced and specific knowledge of legal judgment, explosive and hazardous material handling, and occupational safety;
2. directly involved with the incident and in decision-making process;
3. experience in managing the crisis;
4. knowledge and expertise in crisis management;
5. consented to participate in this study either individual or group setting.

Table 3: List of Expert Respondents

No.	Position	Department
1.	Session Court Judge	Director of State Judiciary (Pahang)
2.	Commander of Bomb Disposal Unit (BDU), State Police Contingent of Negeri Sembilan	Negeri Sembilan Police Contingent Headquarters
3.	Commander of Hazardous Material Team (HAZMAT)	Negeri Sembilan State Fire and Rescue Department

Data collection.

This study uses primary and secondary data. This study used document analysis technique to identify potential legal risks. Three types of documents are used. The documents are the hospital incident report, HICS guideline and legal judgment obtained from legal journal for case laws.

1. The hospital incident reports is documented in a report titled The Future of Healthcare, Sustainability Report 2018.
2. The Incident Planning Guide (IPG) of HICS guideline. In the IPG, two incidents are related to the hospital bomb threat incidents. The incidents are Explosive Incident and Evacuation, Shelter-in-Place, and Hospital Abandonment. According to HICS, the guidelines can be modified to meet the needs of hospitals according to their crisis management setting. The IPG has four parts. The parts are mitigation, preparedness, immediate and intermediate response. For evacuation process, this study uses the IPG to address issues associated with evacuation, shelter-in-place, and hospital abandonment. While for bomb explosion, this study uses the IPG to address

the impact all types of explosive incidents whether they occur at a hospital due to an intentional act (such as bombing or bomb threat) or unintentional event (such as propane tank or hazardous materials explosion).

3. Relevant cases regarding Law of Tort and Law of Evidence from Malaysian, Australian and English cases were analyzed according to the situation in the hospital incidents reports and HICS IPG.

Data Analysis

The steps taken to identify legal risks is presented in Figure 1.

Step 1 Develop a flowchart.

The data analysis started by conducting content analysis on the incident report by the hospital, The Future of Healthcare, Sustainability Report 2018. Then, the narrative of the incident is analyzed and developed into a flow chart as presented in Figure 2

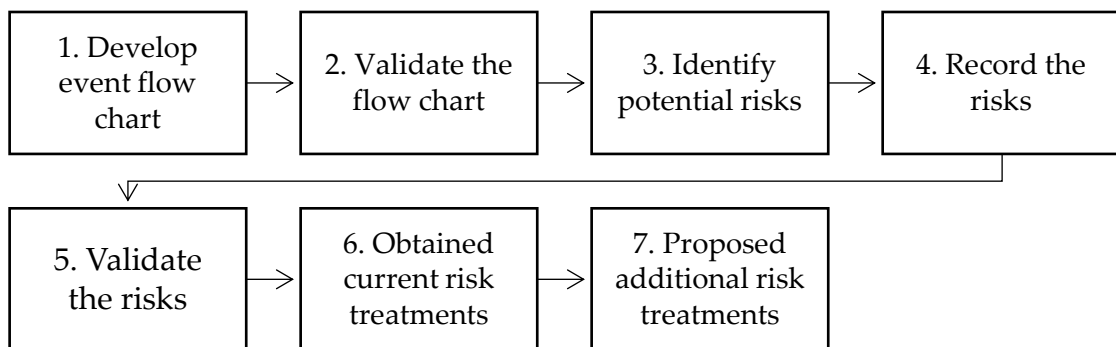


Figure 1: Data Analysis Steps

Step 2 Validate the flowchart with the hospital's Risk Officer.

For effective use in risk assessment, flow diagrams must be clear, accurate, and sufficiently detailed (ISO, 2005). The flowchart was shown to the Risk Officer for validation.

Step 3 Identify potential legal risks.

To identify the potential legal risks, the chronological orders of the incident is compared against HICS guideline, and the relevant case law. The relevant case law is discussed in the literature review section. The aim is to explore similar situations and actions between the incident and the HICS guideline and the case law. Finally, based on the information obtain from these sources, the potential legal risks are identified.

Step 4 Record the risks

Record the potential legal risk into the Legal Risk Identification Matrix (LRIM) as per ISO 31022. The potential legal risks were recorded in Legal Risk Identification Matrix (LRIM) as per ISO 31022. The aim was to determine the category of law related to the potential Legal Risk

Step 5 Validate the risks

Validate the potential legal risks with hospital's director, risk officer, and Safety

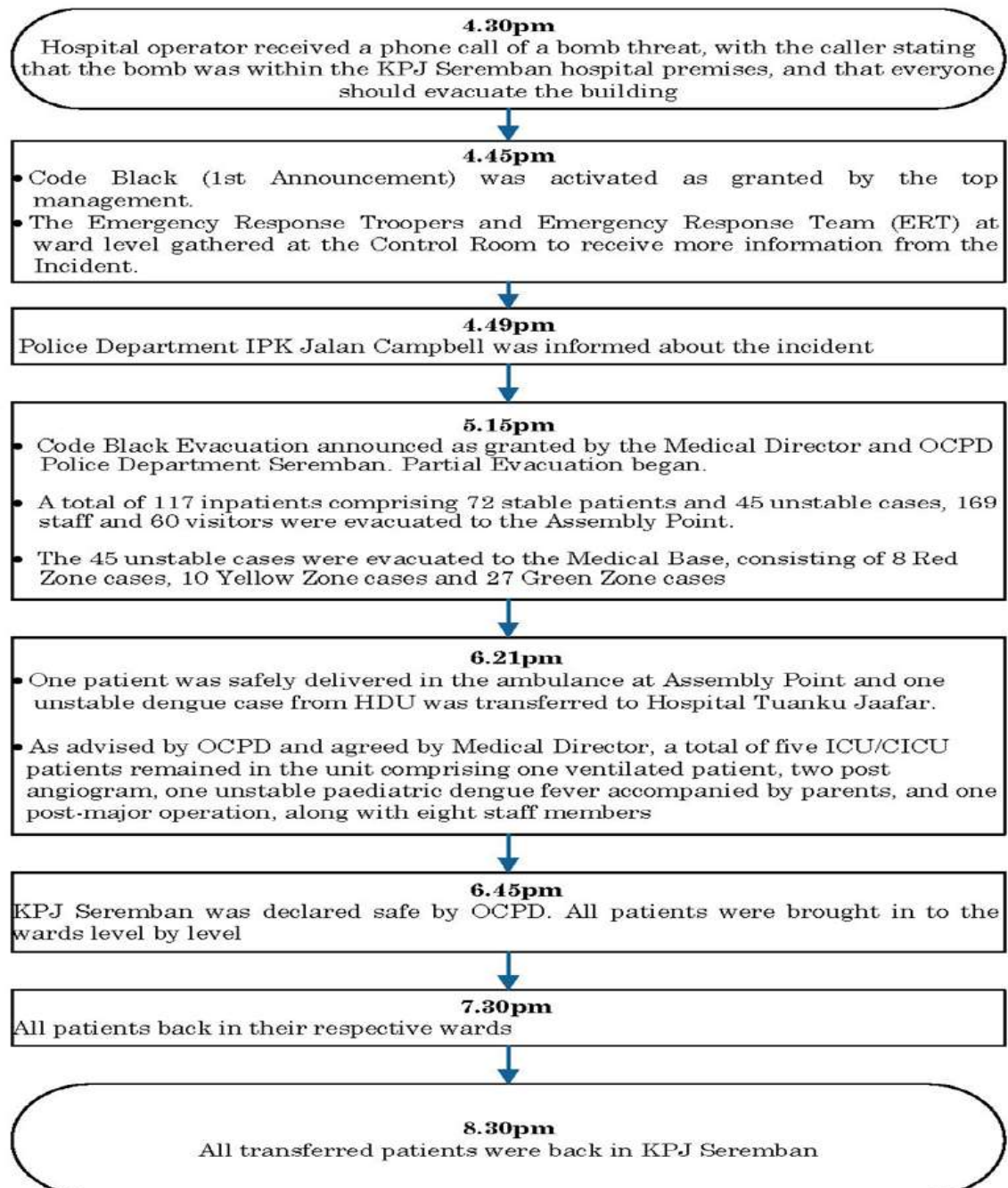


Figure 2: Bomb Threat And Evacuation Process Flow Chart

Legal Risks

shows the legal risks of bomb threat and evacuation is presented in Table 4. The table showed the events of the bomb threat and evacuation process and the crisis preparedness based on HICS Incident Guideline. The third column presented the relevant literature and caselaw related to failure to prepare. The fourth column presented potential legal risks that could be triggered.

Legal Risks, Legal Risk Category, Applicable Relevant Laws, Legal Consequences and Past Cases.

Table 5 presented the legal risks and the category the risks belong. It also showed the relevant law for the category, the legal consequences, and past court cases.

Current And Additional Legal Risk Treatment

Table 6 presented the current and additional risk treatments. The current risk treatments were current risk mitigation strategies of the hospital. The additional risk treatments were risk treatment strategies proposed by the Session Court Judge, Commander of Bomb Disposal Unit (BDU) and Commander of Hazardous Material Team (HAZMAT).

The study identified eleven legal risks as presented in Table 4. For each risk, the study also documented the current risk treatment to mitigate the risk. In addition to current risk treatment, additional risk treatment is also explored. The additional risk treatment can further reduce the consequences of legal risks to the hospital. However, three legal risks were identified but were not yet treated. The risks are the occupier's liability claim for criminal acts of third parties, leak of patient medical information during patient transfer and injury to legally authorized entree in bomb threat and evacuation.

CONCLUSION

This study demonstrated that to identify legal risks for bomb threat incidents and evacuation process in a hospital setting, the hospital management need to identify legal risks and analyze relevant legal cases in order to determine liabilities of the parties involved. Knowledge on legal risks, as well as relevant legal cases are valuable inputs in developing evacuation command through line of authority, coordinating SOP and MOU for patient transfer between government and private sector during crisis situation.

REFERENCE

- Authority, C. E. M. S. (2014). Hospital Incident Command System Guidebook California, United States of America: California Emergency Medical Services Authority (EMSA)
- Aziz, N. H. A., & Yusof, A. A. (2015). The Employer's Duties and Liabilities in Commuting Accidents in Malaysia: Law and Management. *Procedia - Social and Behavioral Sciences*, 211, 796-802. doi:<https://doi.org/10.1016/j.sbspro.2015.11.170>
- Backer, D. D. H. H. S. b. A. (2012). *Janab's Key To Civil Procedure* (Vol. 5th Edition). Kuala Lumpur, Malaysia: Janab (M) Sdn. Bhd.
- Barrera, D. J. S. (2017). Bomb threats and reports of suspicious items in the Philippines: Spatial and temporal patterns. *Security Journal*, 30(3), 665-685.
- Bowen, G. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9, 27-40. doi:10.3316/QRJ0902027
- DalGLISH, S. L., Khalid, H., & McMahan, S. A. (2020). Document analysis in health policy research: the READ approach. *Health Policy and Planning*, 35(10), 1424-1431. doi:10.1093/heapol/czaa064
- Finucane, D. J. (2018). Unhealthy complacency: the vulnerability of US hospitals to direct terrorist attacks. *Journal of healthcare risk management*, 37(3), 8-12.
- Ganor, B., & Wernli, M. H. (2013). *Terrorist attacks against hospitals case studies: International Institute for Counter-Terrorism (ICT) Herzliya, Israel.*
- Glasberg, R., Hartmann, M., Draheim, M., Tamm, G., & Hessel, F. (2014). Risks and Crises for Healthcare Providers: The Impact of Cloud Computing. *The Scientific World Journal*, 2014, 7. doi:<http://dx.doi.org/10.1155/2014/524659>
- Hassan, K. H. (2015). Corporate Liability under Malaysian Occupational Safety and Health Legislation. *International Journal of Business and Society*, 16(2).
- Jenkins, B. M., Affairs, O. o. E., Corporation, R., Security, U. S. C. S. C. o. H., & Affairs, G. (2009). *Terrorists Can Think Strategically: Lessons Learned from the Mumbai Attacks: Rand Corporation Santa Monica CA.*
- Johansson, H., & Jönsson, H. (2007). *Metoder för risk-och sårbarhetsanalys ur ett systemperspektiv, rapport 1010. Lund, Sweden: Lunds universitet.*

- Kassim, D. P. N. J. (2010). *Law and Ethics Relating to Medical Profession*. Selangor, Malaysia: International Law Book Services.
- Kassim, P. N. J., & Ramli, N. (2016). The Inviolability of Medical Confidentiality in Malaysia: An Analysis of the Rules and Exceptions. *IIUM Law Journal*.
- KPJ. (2018a). *The Future of Healthcare, Integrated Report 2018*. Retrieved from Kuala Lumpur, Malaysia:
- Ministry of Health, M. (2017). *Health Facts 2018 (Reference Data for Year 2017)*. Retrieved from Putrajaya, Malaysia:
- Ministry of Health, M. (2022). *Health Facts 2022 (Reference Data for Year 2021)*. Retrieved from Putrajaya, Malaysia:
- Mohamad, A. M. (2019). Admissibility and authenticity of electronic evidence in the courts of Malaysia and United Kingdom. *International Journal*, 4(15), 121-129.
- Moorhead, R., & Vaughan, S. (2015). Legal Risk: Definition, Management and Ethics. *SSRN Electronic Journal*. doi:10.2139/ssrn.2594228
- Newman, G. R. (2011). *Bomb Threats in Schools*. Washington DC: Center for Problem-Oriented Policing
- Park, H. J., Cho, D. Y., Park, Y. S., Kim, S. W., Park, J. H., & Park, N. C. (2016). Controlling Legal Risk for Effective Hospital Management. *World J Mens Health*, 34(1), 56-63. doi:10.5534/wjmh.2016.34.1.56
- Pheng, L. M., & Detta, I. J. (2018). *Business Law (Vol. Third Edition)*. Selangor, Malaysia: Oxford University Press.
- Ripley, M. (2020). *The Orange Book: Management of Risk—Principles and Concepts*. London, United Kingdom
- Sapp, A., Huff, T., Kelm, K., & Tunkel, R. (2001). Behavior and characteristics of bomb related offenders. Quantico, VA: National Center for the Analysis of Violent Crime.
- Standardization, I. O. f. (2020). Risk management — Guidelines for the management of legal risk. In (Vol. ISO 31022:2020). Geneva, Switzerland: International Organization for Standardization.
- Talib, N. (2016). *Law of Torts in Malaysia (Vol. Third Edition)*. Selangor, Malaysia: Thomson Reuters Malaysia Sdn.Bhd.
- Tuck, S. (2013). To the Rescue: Liability in Negligence for Third Party Criminal Acts in the United States and Australia. *Ind. Int'l & Comp. L. Rev.*, 23, 183.

Wabo, N. C., Örtenwall, P., & Khorram-Manesh, A. (2013). Hospital evacuation; planning, assessment, performance and evaluation. *Journal of Acute Disease*, 58-64.

Table 4: Legal Risks of Bomb Threat and Evacuation

No	Bomb Threat and Evacuation	HICS Incident Guideline	Legal Risk Reference	Legal Risk
1	<p>4.30 PM</p> <p>The hospital operator received a phone call of a bomb threat, with the caller stating that the bomb was within the Seremban hospital premises, and that everyone should evacuate the building</p>	<p>IMMEDIATE AND INTERMEDIATE RESPONSE- EXPLOSIVE INCIDENT</p> <p>Does your hospital have procedures to quickly obtain incident-specific details (e.g., voicemail messages, witnesses, security cameras, surveillance tapes, and other data) for evidence and intelligence gathering?</p>	<p>Relevant Literature</p> <p>(Dunlop, 2004) (Mohamad, 2019),</p>	<p>Failure to gather the evidence for criminal and civil litigation in the bomb threat and evacuation process</p>
			<p>Relevant Caselaw</p> <p>Area of Law: Evidence Law <i>PP v Ong Cheng Heong [1998] 6 MLJ 678</i></p>	
			<p>Relevant Literature</p> <p>(Huang et al., 2019)</p>	
2		<p>IMMEDIATE AND INTERMEDIATE RESPONSE- EXPLOSIVE INCIDENT</p> <p>Does your hospital have an evidence collection policy developed in conjunction with local law enforcement and prosecutorial authorities?</p>	<p>Relevant Literature</p> <p>(Huang et al., 2019)</p>	<p>Tainted evidence which has been collected for criminal and civil litigation in bomb threat and evacuation process</p>
			<p>Relevant Case law</p> <p>Area of Law: Evidence Law <i>Ahmad Najib bin Aris v PP [2009] 2 MLJ 613, PP v Lim Kang Wee [2015] 3 MLRH</i></p>	
			<p>Relevant Literature</p> <p>(Taaffe et al., 2005), (Aziz & Yusof, 2015)</p>	
3	<p>4.45pm</p> <p>Code Black (1st Announcement) was activated as granted by the top management.</p> <p>The Emergency Response Troopers and Emergency Response Team (ERT) at the ward level gathered at the control room to receive more information on the incident.</p>	<p>PREPAREDNESS- EXPLOSIVE INCIDENT</p> <p>Does your hospital provide annual training for staff in the Explosive Incident Plan, including the use and location of bomb threat phone call documentation forms, recognition of suspicious packages or items, including initial response safety and notification procedures and recognition of suspicious persons and threatening behaviour, to include initial safety and notification procedures?</p>	<p>Relevant Literature</p> <p>(Taaffe et al., 2005), (Aziz & Yusof, 2015)</p>	<p>Legal Risk</p> <p>Tort claims from employees or staff to the organization related to the bomb threat and evacuation process.</p>
			<p>Relevant Caselaw</p> <p>Area of Law: Tort Law <i>Kanagasabapaty v Narsingham (1979) 2 MLJ 69</i></p>	

No	Bomb Threat and Evacuation	HICS Incident Guideline	Legal Risk Reference	Legal Risk
4	<p>5.15pm Code Black Evacuation announced as granted by the Medical Director and OCPD Police Department Seremban. Partial evacuation began.</p>	<p>IMMEDIATE AND INTERMEDIATE RESPONSE- EXPLOSIVE INCIDENT Does your hospital train staff in their roles and responsibilities when the code is announced? Has training been provided to visiting staff?</p>	<p>Relevant Literature (Wang et al., 2013), (Hanfling et al., 2012), . (Courtney & Hodge Jr, 2011; Pou, 2013)</p> <p>Relevant Caselaw Area of Law: Tort Law <i>Lowns v Woods (1996) Aust Torts Reports 81-376</i></p>	Medical negligence to emergency patients during bomb threat and evacuation process
5		<p>IMMEDIATE AND INTERMEDIATE RESPONSE-EVACUATION, SHELTER-IN-PLACE, & HOSPITAL ABANDONMENT Does your hospital have criteria and a rapid decision-making process to determine the need to activate the Evacuation, Shelter-in-Place, and Hospital Abandonment Plan?</p>	<p>Relevant Literature (Taaffe et al., 2005), (Hassan,2015),</p> <p>Relevant Caselaw Area of Law : Tort Law <i>Abdul Aziz bin Awang @ Muhammad & Ors v Tenaga Nasional Bhd [2020] 7 MLJ</i></p>	Late Evacuation Order – Liability of public authorities and the organization during bomb threat and evacuation process
6	<p>5.15pm A total of 117 inpatients comprising 72 stable patients and 45 unstable cases, 169 staff and 60 visitors were evacuated to the Assembly Point. The 45 unstable cases were evacuated to the Medical Base, consisting of 8 Red Zone cases, 10 Yellow Zone cases and 27 Green Zone cases</p>	<p>IMMEDIATE AND INTERMEDIATE RESPONSE-EVACUATION, SHELTER-IN-PLACE, & HOSPITAL ABANDONMENT Does your hospital’s Evacuation, Shelter-in-Place, and Hospital Abandonment Plan include designated evacuation locations, assembly areas, and routing options, including within the hospital (atrium, auditorium, gym, etc.) and external to the hospital (adjacent building, nursing home, other hospitals, schools, etc.)?</p>	<p>Relevant Literature (D. E. Alexander, 2015), (Cocanour et al., 2002), (Huang et al., 2019), (Pheng & Detta, 2018)</p> <p>Relevant Caselaw Area of Law: Tort Law <i>Sri Inai (Pulau Pinang) Sdn Bhd. V. Yong Jit Swee & Ors (2003) 1 MLJ 273</i></p>	Failure of the organization to provide safe escape route for Bomb Threat and Evacuation process

No	Bomb Threat and Evacuation	HICS Incident Guideline	Legal Risk Reference	Legal Risk
7		MITIGATION-EVACUATION, SHELTER-IN-PLACE, & HOSPITAL ABANDONMENT Does your hospital participate in pre-incident local response planning with public safety officials (e.g., emergency medical services, fire, and law enforcement), local emergency management officials, other area hospitals, regional healthcare coalition coordinators, and other appropriate public and private organizations, including meetings and conference calls to plan and share status?	Relevant Literature (Huang et al., 2019), (Ricci, Griffin, Heslin, Kranke, & Dobalian, 2015),(O'Neill, 2005) Relevant Caselaw Area of Law: Tort Law <i>Yeap Cheng Hock v Kajima-Taisei Joint Venture [1973] 1 MLJ 230</i>	Failure to provide safe temporary shelter to patients and victims for Bomb Threat and Evacuation process
8		MITIGATION-EXPLOSIVE INCIDENT Does your hospital identify all potential entry and exit points of the hospital and contain this information in a single document or file for rapid access?	Relevant Literature (Kansagra et al., 2008; Simon, Khan, & Delgado, 2003), (Tuck, 2013) Relevant Caselaw Area of Law: Tort Law <i>Al-Najar and others v The Cumberland Hotel (London) Ltd [2019] EWHC 1593 (QB)</i>	Legal Risk Occupier's liability claims for criminal acts of third parties during bomb threat and evacuation process
9	6.21pm One patient was safely delivered in the ambulance at Assembly Point and one unstable dengue case from HDU was transferred to Hospital Tuanku Jaafar.	EXTENDED RESPONSE AND SYSTEM RECOVERY-EVACUATION, SHELTER-IN-PLACE, & HOSPITAL ABANDONMENT	Relevant Literature (Cocanour et al., 2002), (Uppal et al., 2013), (Read & Ashford, 2004), (P. N. J. Kassim & Ramli, 2016)	The leak of patient medical information during patient transfer in the event of a bomb threat and evacuation process

No	Bomb Threat and Evacuation	HICS Incident Guideline	Legal Risk Reference	Legal Risk
		Does your hospital have procedures for repatriation of patients and staff, medical records management?	Relevant Caselaw Area of Law: Tort Law <i>Dr Tan Ah Ba v Dr Wong Foot Meow [2012] 7 MLJ 467</i>	
10	6.21pm As advised by OCPD and agreed by Medical Director, a total of five ICU/CICU patients remained in the unit comprising one ventilated patient, two post angiogram, one unstable pediatric dengue fever accompanied by parents, and one post-major operation, along with eight staff members	EXTENDED RESPONSE AND SYSTEM RECOVERY-EVACUATION, SHELTER-IN-PLACE, & HOSPITAL ABANDONMENT Does your hospital maintain hazardous materials, including isotopes, in a safe and secure area of the hospital? Is the inventory routinely checked?	Literature Reference (Long-fei, Ming, Wu-yuan, & Yu-chen, 2011) Relevant Caselaw Area of Law: Tort Law <i>Shamsuddin v Yap Choh Teh & Anor [1969] 1 MLJ 26</i>	Injury to legally authorized entree in bomb threat and evacuation
11		MITIGATION -EXPLOSIVE INCIDENT Does your hospital maintain potentially explosive and combustible materials (e.g., oxygen, propane, acetylene) in a safe and secure environment? Are the sites routinely observed? Is there a policy or procedure in place if materials are tampered with or missing?	Literature Reference (Jiang, Zhang, Shang, & Tian, 2014), (Long-fei et al., 2011) (Edward et al., 2017), (Dass, 2015) Relevant Caselaw Area of Law: Insurance Law <i>Glicksman v Lancashire and General Assurance Co Ltd [1925] 2 KB 593</i> <i>Chung Kuo Ping @ Richard v Malaysian Assurance Alliance Berhad [2007] MLJU 587</i>	Misrepresentation or nondisclosure of insurable interest from the organization for a bomb threat and evacuation event

Table 5 Legal Risks, Legal Risk Category, Applicable Relevant Laws, Legal Consequences and Past Cases.

No.	Legal Risks	Legal Risk Category	Applicable Relevant Laws	Legal Consequences	Past Cases
1.	Failure to gather the evidence for criminal and civil litigation in the Bomb Threat and Evacuation process	Omission to exercise rights	Law of Tort – the organization cannot establish defenses against claim	Monetary compensation for loss in litigation	<i>PP v Ong Cheng Heong [1998] 6 MLJ 678</i>
2.	Tainted evidence that has been collected for criminal and civil litigation in the Bomb Threat and Evacuation process	Noncompliance with applicable laws	Evidence Law – the evidence cannot be used in litigation	Possibility of loss in Court Trial	<i>Ahmad Najib bin Aris v PP [2009] 2 MLJ 613, PP v Lim Kang Wee [2015] 3 MLRH</i>
3.	Tort Claim from Employee to the Organization	Omission in exercising rights	Law of Tort – Breach Duty of Care	Monetary compensation	<i>Kanagasabapaty v Narsingham (1979) 2 MLJ 69</i>
4.	Medical Negligence to emergency patients	Omission in exercising rights	Law of Tort – Medical Negligence	Monetary compensation	<i>Lowns v Woods (1996) Aust Torts Reports 81-376</i>
5.	Late Evacuation Order – Liability of Public Authorities or The Organization	Noncompliance with applicable laws	Administration Law- Government Proceeding Act	Monetary compensation	<i>Abdul Aziz bin Awang @ Muhammad & Ors v Tenaga Nasional Bhd [2020] 7 MLJ</i>
6.	Failure to provide a safe escape route	Omission in exercising rights	Law of Tort - Occupier's Liability	Monetary compensation	<i>Sri Inai (Pulau Pinang) Sdn. Bhd. v Yong Yit Swee [2003] 1 MLJ 273</i>
7.	Failure to provide safe temporary shelter to patients and victim	Omission in exercising rights	Law of Tort – Breach Duty of Care	Monetary compensation	<i>Yeap Cheng Hock v Kajima-Taisei Joint Venture [1973] 1 MLJ 230</i>
8.	Occupier's Liability Claim for Criminal Acts of Third Parties	Omission in exercising rights	Law of Tort – Occupier's Liability	Monetary compensation	<i>Al-Najar and others v The Cumberland Hotel (London) Ltd [2019] EWHC 1593 (QB)</i>
9.	The leak of Patient Medical information during patients transfer Process	Omission in exercising rights	Law of Tort – Medical Confidentiality	Monetary compensation	<i>Dr Tan Ah Ba v Dr Wong Foot Meow [2012] 7 MLJ 467</i>
10.	Injury to legally authorized entree	Omission in exercising rights	Law of Tort - Occupier's Liability	Monetary compensation	<i>Shamsuddin v Yap Choh Teh & Anor [1969] 1 MLJ 26</i>
11.	Misrepresentation/ nondisclosure of insurable interest from the organization	Breach of contract	Insurance Law where the contract did not valid <i>ab initio</i>	Contract void	<i>Glicksman v Lancashire and General Assurance Co Ltd [1925] 2 KB 593</i>

No.	Legal Risks	Legal Risk Category	Applicable Relevant Laws	Legal Consequences	Past Cases
					<i>Chung Kuo Ping @ Richard v Malaysian Assurance Alliance Berhad [2007] MLJU 587</i>

Table 6 Current and Additional Legal Risk Treatment

	Legal Risks	Hospital Risk Management Team	Session Court Judge	Commander of Hazardous Material Team (HAZMAT)	Commander of Bomb Disposal Unit (BDU)
		Current	Additional		
1.	Failure to gather the evidence for criminal and civil litigation.	<ol style="list-style-type: none"> 1. Adequate power supply backup and CCTV recording storage during emergency hospital. 2. Persons entering the premises for work need to apply Permit To Work (PTW) from the management. 3. Recording of persons entering and exiting certain areas is compulsory. 	<ol style="list-style-type: none"> 1. Develop a good routine system to enhance evidence gathering. For example, keep relevant documents such as maintenance records of security systems recording, individuals entering and exiting the building. Including CCTV recording footage. 		
2.	Tainted evidence collected for criminal and civil litigation.	<ol style="list-style-type: none"> 1. To secure the evidence, especially in the electronic form, layers of protection are used to safeguard the data. Including the usage of passwords to prevent unwanted intrusion or tampering with the data 	<ol style="list-style-type: none"> 1. For a court trial, the person who produces the document (document maker) as evidence needs to testify in court. This is to ensure the credibility of the evidence. If the person has practised good document keeping before, this practice will help during court trials. 		
3.	Tort Claim from employees to the organization.	<ol style="list-style-type: none"> 1. Update employees on evacuation guidelines for safe escape routes during emergencies. 			

		<ul style="list-style-type: none"> 2. Preventing them from using the lift service. 3. Subscription to Group Personal Accident Insurance/Takaful to compensate employees. 			
4.	Medical negligence to emergency patients.	<ul style="list-style-type: none"> 1. Adequate training especially when moving patients during emergencies. 2. The training includes Basic Life Support (BLS) and Advanced Cardiac Life Support Training (ACLS). 3. Compulsory training for all levels of staff. 			
5.	Late evacuation order – Liability of public authorities and the organization.	<ul style="list-style-type: none"> 1. All members of ERT underwent training for emergency situations with Royal Malaysian Police and Fire Brigade. 2. The output of risk assessment conducted by the ERT is valuable guidance for the hospital management to decide on proper actions. 3. The decision to evacuate the building is proposed during working hours to ensure sufficient manpower to move patients. 		<ul style="list-style-type: none"> 1. install a fire alarm panel. based on the heat and smoke detector the panel can be a guide to premise owners on the current situation in the building. the panel can assist in finding a safe escape route during emergencies. 2. The information on the fire alarm panel can help the authority and premise owner in decision making. 	<ul style="list-style-type: none"> 1. The training of the search team for the bomb threat is crucial. This team must be trained by the Royal Malaysian Police Bomb Squad. A well trained team can decrease the time taken to search the suspicious item, especially when the premise has many levels. 2. After finding the suspicious item, they need to inform the police for further action. 3. In addition, BDU carry out their task by using the standardized explosive handling guidelines prepared by the Royal Malaysian Police.
6.	Failure of the organization to provide safe escape routes.	<ul style="list-style-type: none"> 1. Always comply with the building safety requirement as per Ministry of Health (MOH) Licensing requirements and Sec.15 and 17 of OSHA. 2. Routine inspection to ensure the exit signages are visible, no blockage at the stairs and exit pathway. 		<ul style="list-style-type: none"> 1. The Safety Committee can play their role by finding safe escape routes during evacuation process. 2. The committee should consists of Incident 	<ul style="list-style-type: none"> 1. The usage of public address (PA) system is important during bomb threat. The premise owner can call the trained search team, to gather and find the suspicious item in the building. This will reduce

				<p>Commander, Safety Officer, Floor Warden, Rescue Team, and Extinguishing Team.</p> <p>3. Floor warden play an important role in finding the safe escape route during evacuation and to ensure everybody has left the premises.</p> <p>4. Use public address (PA) system to guide people to exit a building.</p>	<p>panic among the employees and visitors, and the safe escape routes will not be crowded.</p>
7.	<p>Failure to provide safe temporary shelter to patients and victims.</p>		<ol style="list-style-type: none"> 1. The adequacy of preparedness for the crisis by the hospital will be observed during a court trial. 2. The preparedness include how the hospitals prepare against emergency situations, the reasonableness preparing evacuation shelter immediately and adequate exercises on evacuation to familiarize hospital staff with evacuation procedures 		
8.	<p>Occupier's liability claim for criminal acts of third parties during bomb threat and evacuation process</p>				
9.	<p>The leak of patient medical information during patient transfer.</p>				

10.	Injury to legally authorized entree in bomb threat and evacuation.				
11.	Misrepresentation/nondis closure of insurable interest from the organization.		<ol style="list-style-type: none"> 1. Effective and efficient communication between premise owners with third party contractors during the installation of firefighting and prevention equipment. 2. The communication is critical as failure of the equipment can worsen the situation during an emergency and the premise owner will bear the liabilities 		

CONCEPTUAL FRAMEWORK OF RISK COMMUNICATION STRATEGY FOR TELECOMMUNICATION SECTOR

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Abstract

The telecommunication sector is one of the most critical industries in Malaysia. It offers services such as voice communication, internet access, data transmission, wireless network management, satellite networks. Including other infrastructural developments like mobile networks, fiber-optic cables, and internal communication. These services target stakeholders with different interests and demands, including employees, regulators, and the public. The industry operates in a dynamic environment, with continuous changes in technology, consumer behaviour, regulations, and various risks. These changes significantly impact stakeholders. These stakeholders need a secure, reliable, and accessible telecommunication infrastructure. Any disruption in this infrastructure can lead to interruptions in communication services for individuals, businesses, and organizations. To address the risks and challenges in the telecommunication industry, telecommunication companies adopt several strategies. One of the strategies includes effective risk communication. Effective risk communication involves clear and transparent communication during crises, addressing stakeholder concerns, and proactively informing stakeholders about potential risks. Establishing two-way communication through feedback mechanisms is crucial for improving stakeholder satisfaction and trust. Additionally, educating stakeholders about safe usage practices, new services, and technologies can reduce misunderstandings and enhance stakeholder's trust. This study presents a proposed conceptual framework for risk communication strategy and stakeholders' trust. It details the components of a risk communication strategy with the aim of enhancing risk communication practices in telecommunication sector.

Keywords: *risk communication strategy, risk management, communication, trust.*

INTRODUCTION

Historically, risk communication was largely a one-way form of communicating, with the public being told what the experts think to be important (Ng & Hamby, 1997). This is no longer considered acceptable or sufficient by the public; the public wants to be involved (Ng & Hamby, 1997). Risk communication includes any type of two-way communication among different stakeholders, during which it is possible to assess the risk and make decisions to take appropriate measures in disasters (Fathollahzadeh et al., 2023). Considering the role of risk communication in the disaster management cycle, the need for effective communication among all stakeholders is quite clear (Fathollahzadeh et al., 2023). Failing to communicate clearly among all stakeholders fails to gain public trust and acceptance (Wiedemann

& Schutz, 2008). Thus, open and transparent decision-making processes, including public participation and processes for dialogue, have for years played a central role in the discussion of how to solve conflicts about the possible risks of new technologies (Wiedemann & Schutz, 2008).

Communication in such an arena faces many serious problems: How can a communicator justify the application of professional standards if these are hardly intelligible for most people and trigger anti-elitist resentments? How can a communicator deal with the typical condition of dissent in technical, social, and political communities about the seriousness of different risks? How can a communicator cope with the intuitive heuristics that govern people's processing of probabilistic information? How can a communicator establish an aura of credibility if s/he has a vested interest in the proposed acceptance of his or her message? (Renn & Levine, 1991). Although risk communication has been previously discussed in various literature, the links between trust and risk communication are not generally discussed in the telecommunication literature, especially in the Malaysian context. Fernandez et al. (2019) emphasize that the current risk communication strategies in telecommunication companies in Malaysia are reactive, lack coherence among authorities, and fail to build trust. The study on the telecommunications sector in Malaysia primarily focuses on the health risks from telecommunication structures' radio-frequency electromagnetic field (RF-EMF) emissions (Fernandez et al., 2019; Yong et al., 2021). Other studies discuss the global context of risk communication strategy and focus on something other than the Malaysian cultural, social, and regulatory context.

This study argues that risk communication strategy has a significant influence on the level of stakeholder trust in the Malaysian telecommunication sector. To support the argument, the risk communication strategies were grouped into components. The risk communication components are used as proxies that can impact stakeholders' trust. The components were derived from the literature review on risk communication implementation in various sectors.

Literature Review

Risk Communication Strategies

Risk communication is an ongoing, interactive process that evolves over time. It is not a one-time product but a continuous cycle that responds to changes in information, context, and stakeholder needs. According to Rohrman and Bernd (2008), risk communication is a social process by which people become informed about hazards, are influenced towards behavioural change, and can participate in decision-making about risk issues in an informed manner. Chen (2023) emphasized that proactive and well-prepared risk communication strategies are important in mitigating the impact of risks. Diallo et al. (2017) highlight that the increasing frequency of human-caused and natural disasters globally requires effective

communication during such crises. The stakeholders for the study were telecommunication employees, regulators, and the public. The stakeholders focused on individuals who work as risk management practitioners, cybersecurity professionals, internal auditors, and those involved in governance, risk, compliance, regulators, and employees in cybersecurity companies.

Risk communication involves several strategies that work together to ensure effective and meaningful communication of risks. These strategies can affect risk communication, influencing how information about risks is conveyed, received, and understood (Piet, 2008). These strategies serve as the foundation for the telecommunication industry and can be adopted by various industries. This allows them to strategize risk communication according to their specific needs regarding risks, incidents, or crises. Different risk communication strategies may be appropriate for different goals (Bier, 2001).

Risk Communication Strategies Conceptual Framework

The conceptual framework of risk communication strategies and their impact on stakeholders' trust is depicted in Fig. 1. The strategies are grouped into the following components; main goal of risk communication, the message of risk communication, communication channel, trusted messenger/spoke person, risk communication schedule, feedback mechanism, training and capacity building, and training on emergency and continuity plans.

1. Main Goal of Risk Communication

The first component is the main goal of the risk communication effort. To have a successful risk communication practice, communication efforts must have a clearly defined objective. Kumbasar (2022) highlighted the importance of risk communication goals, which aim to promote awareness and understanding of risks. Typical objectives for risk communication are problem definition, options generation, solution selection, and implementation (Ng & Hamby, 1997). A good risk communication should identify the purposes and objectives of communication efforts, which include the roles, responsibilities, resources of the involved actors, identification of the audience, and knowledge of the audience (Höppner et al., 2012). The objective in shaping the quality of the relationship is to build up a bond of mutual trust between the stakeholders, where without trust, risk communication is ineffective (Höppner et al., 2012). Trust and confidence have to be gained by meeting the institutional goals and objectives (Renn & Levine, 1991).

2. Risk Communication Message

The second component is the risk communication message. Essential criteria for developing risk communication messages are clear, transparent, accurate, and consistent. The messages that deliver the most important information about risks are crucial. It is important to create key messages that everyone can remember so that

they can make recovery actions more effective and reduce confusion (Irwanti et al., 2023). According to Soares et al. (2023), interacting arguments often coalesce to reveal points or convergence as more information is revealed about a risk or crisis. Hence, a clear message is important. Messages should be designed to meet the needs and concerns of the target audience. The message should reflect the information that needs to be shared.

Message format can either be qualitative (i.e. verbal) or quantitative (i.e. both verbal and numerical) (Madison & Wisconsin, 1999). An ineffective message could make it hard to understand the message, resulting in failed communication efforts. People often struggle to grasp message concepts due to the use of (1) technical terms, which can be addressed by substituting understandable terms or providing clear definitions, (2) difficulty in foreseeing structures or processes which may be overcome by presenting a big picture, utilizing main points, diagrams, or text features, and (3) concepts that are hard to believe which can be addressed through a stepwise method that acknowledges apparent believability, identifies inconsistencies and presents a more accepted and adequate view (Hamby & Ng, 1997). Hence, communicating risk in a message should use practical terms and examples. In conveying the message to the target groups, risk communicators must strive to make the message simple and legible (Khatibi et al., 2022).

3. Risk Communication Channel

The third component is the risk communication channel. Media plays a direct role in the communication of risk to the mass public by conveying engaging information to a wide audience (Smillie & Blissett, 2010). Identifying the most effective communication channels for reaching the target audience is crucial. This may include traditional media, social media, community meetings, and other platforms. Risk communication can utilize various media channels, such as public meetings, newspapers, radio, television, and the Internet, which is advisable for risk communicators (Hamby & Ng, 1997). The study emphasized the importance of maintaining message consistency across all platforms.

On the other hand, Irwanti et al. (2023) emphasize that face-to-face communication is also important in risk communication activities. It is the requirement of the qualitative risk communication approach, which considers possible lack of trust and attempts to establish appropriate channels for two-way communication (Clauberg et al., 2021). Kelly (2014) analyzed the use of social media in the context of risk and crisis communication. The study highlighted its efficacy in delivering timely and accurate information to diverse stakeholders. One common element of most effective risk communication strategies is that they are customized to meet the target audiences' specific interests, concerns, and habits. This means that stakeholders require different types of messaging and distribution channels (Ellis, 2018).

4. Credible and Trusted Messenger

The fourth component is a credible and trusted messenger or spokesperson. The spokespersons should have the ability to connect with the stakeholders and build trust. Although risk communication is normally delivered by one person, risk communication programs require teamwork (Hamby & Ng, 1997). Furthermore, according to Hamby and Ng (1997), a different team may be formed for each of the various risk communication needs. Various professional fields may develop, disseminate, and assess communications on behalf of organizations. The field may include, but is not limited to, management, marketing, advertising, and public relations (Hallahan et al., 2007).

The spokesperson is not solely responsible for the messages to be conveyed. He or she must be involved in the development of those messages to ensure that the spokesperson “owns” them (Reynolds, 2022). Further, according to Reynolds (2022), the words and the person must match, meaning the spokespersons should not just read a statement but also understand it. If the spokesperson does not fully understand the purpose behind the messages or recommendations, he or she will have difficulty assuming a stance of confidence and conveying believability and trust (Reynolds, 2022). Active risk managers facilitate risk communication by tracking risk management decisions throughout the project's lifecycle, ensuring consistency, clarity, and transparency in communication processes (Victoria, 2006).

5. Risk Communication Schedule

The fifth component is the risk communication schedule. A risk communication schedule is important to determine the timing of the communication efforts. Establish a risk communications schedule for regular updates or follow-up communications as needed (Victoria, 2006). This schedule will assist the team in communicating the information in a timely manner (Hamby & Ng, 1997). The schedule should consider the audience analysis information and the risk's timing and severity (Regina & Andrea, 2009). The schedule should also include (1) time for scientific review of risk assessment information, (2) management, legal, and public affairs reviews, and (3) time for the audience to assimilate information (Hamby & Ng, 1997). A schedule will assist the team leaders in ensuring that the risk communication program does not fall behind the project, and the plan must be communicated to all departments whose input is vital to the risk communication effort (Hamby & Ng, 1997).

6. Feedback Mechanism

The sixth component is a feedback mechanism. A feedback mechanism is needed to receive feedback from the stakeholders and acknowledge their concerns. This may involve setting up hotlines, online forums, or other means for the public to ask

questions or provide input (Victoria, 2006). Risk feedback can enhance communication between an affected community and government agencies and improve problem-solving (Benjamin & Belluck, 1990). Using risk-feedback techniques can result in citizens embracing the remediation solution because they are an integral part of the option selection (Benjamin & Belluck, 1990). Piet (2008) highlighted that risk communication can push the public to coordinate their disagreements and achieve an understanding of complex and contingent situations. The company should ensure safe, trusted, and preferred feedback and complaints mechanisms. The mechanism should utilize existing channels to collect communities' feedback and complaints and to receive, register, review, investigate, and resolve them satisfactorily. The most effective mechanisms use multiple, two-way communication channels adapted to the needs of specific groups in a particular context (e.g., social media platforms, face-to-face consultations, surveys, town hall meetings, public feedback boxes) (FAO, 2020).

7. Training and Capacity Building

The seventh component is providing training and capacity building. Stakeholders should be aware of and knowledgeable about the risks associated with the company. This education helps them identify and properly react to risks (Leah et al., 2022). There are multiple ways for the company to engage with stakeholders, such as through webinars, awareness days, and other initiatives (Petra, et al., 2016). The community should be actively involved in the risk communication process. Risk communication and community engagement refer to the processes and approaches to systematically consult, engage, and communicate with people and communities who are at risk, or whose practices or behaviour affect risk (FAO, 2020). In the rapid evolution of technology, the associated risks also change. It is crucial to educate stakeholders about the risks they are exposed to. Therefore, improving public awareness and developing overall communication strategies could reduce their vulnerability, and in turn, it will enhance the capacities of various stakeholders in the community and improve sustainability at the local level (Khan, 2017)

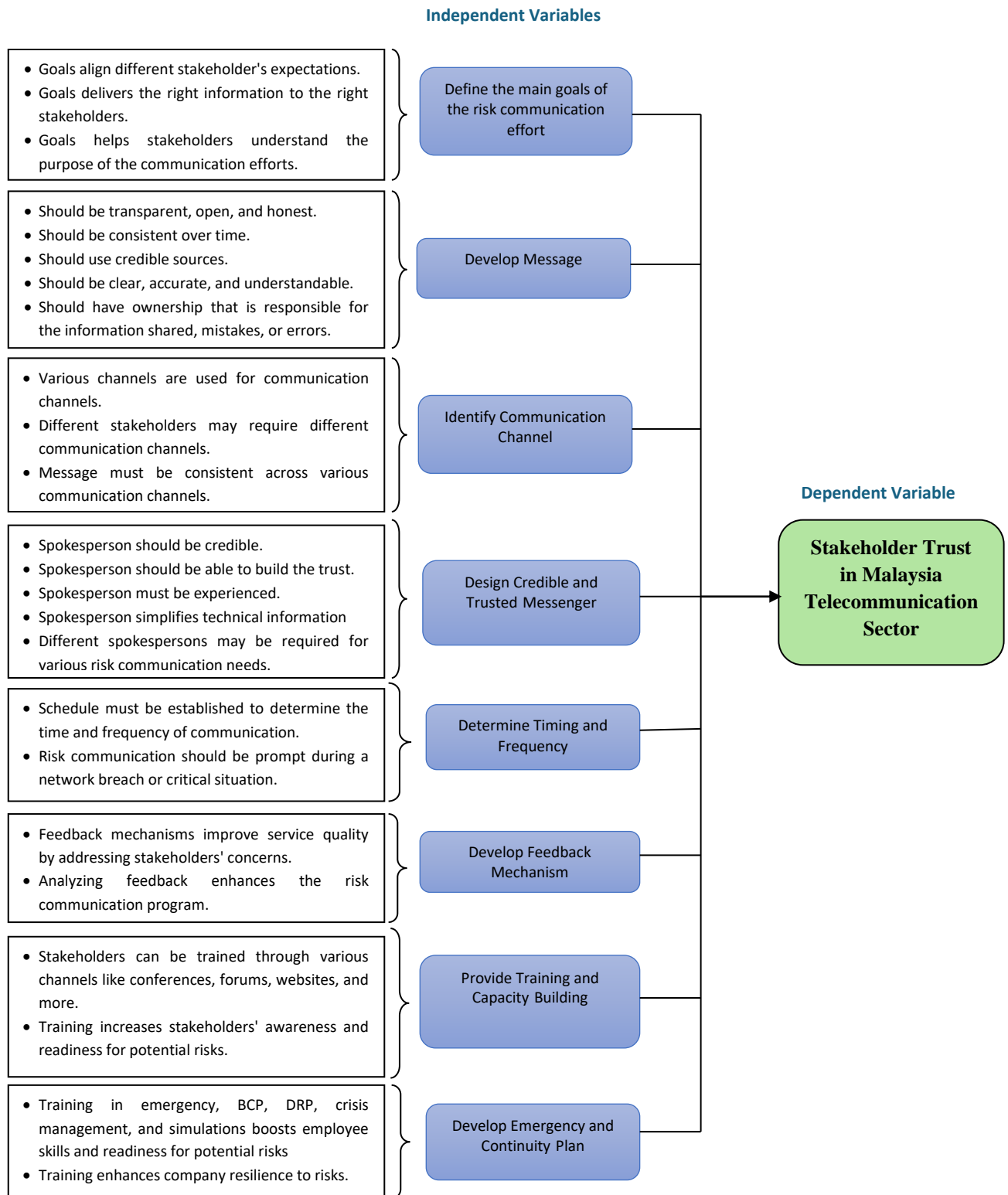
8. Training on Emergency and Continuity Plans

The eighth component is training on emergency and continuity plans. With regard to communication, training activities and socialization on mitigation are processes of communication (Irwanti et al., 2023). Effective risk communication involves early training for team members, development of communication flows, review processes, and regular training updates to adapt to personnel changes, ensuring that risk communication is integrated into the project schedule and management processes (Victoria, 2006). For telecommunication employees, training about emergency preparedness, including developing crisis or disaster plans, is crucial for their awareness of the risks related to their work environment (Renschler et al., 2016). The companies may have other procedures, such as a Disaster Risk Management Plan (DRMP) and an Emergency Response Team (ERT), specifically for

telecommunication employees to communicate, respond, and prepare for any crises or incidents related to their industry.

The requirement to establish a Disaster Risk Management Plan (DRMP) and Emergency Response Team (ERT) in Malaysia is stated in the Occupational Safety and Health Act 1994 (Aziz et al., 2019). Communicating promptly during a crisis or when risks emerge is crucial. Emergency preparedness is important, including developing crisis or disaster plans and employee training. Whether it is a natural disaster, such as flooding, or a man-made disaster, such as a fire, emergencies cannot be predicted (Renschler et al., 2016). According to Renschler et al. (2016), critical workplace readiness tasks involve creating plans for emergency evacuations, ensuring employees have access to essential emergency information, and defining the specific roles employees are expected to fulfil in emergency responses. Hence, these emergency and continuity plans, whether business continuity management (BCM), DRMP, or ERT, can help telecommunication employees be ready to respond to any crises. This preparedness can increase employees' trust in the company's ability to manage risks.

Figure 1: Conceptual Framework of Impact of Risk Communication Strategy on Stakeholder Trust in Malaysia Telecommunication Sector



RESEARCH METHODOLOGY

Research Design

This study uses mixed methods, using quantitative and qualitative approaches to collect and analyse data. The researcher used an online survey platform that contains closed-ended and open-ended questions to collect the numerical, quantitative, and qualitative data (Williams, 2007).

Research Participants

The targeted respondents for this study include employees of telecommunication companies such as Maxis and TMOne, particularly in Enterprise Risk Management, Internal Audit, Cybersecurity, Governance, Risk, and Compliance. The respondents also involve the telecommunication industry regulator, the Malaysian Communications and Multimedia Commission (MCMC), particularly from divisions such as Regulatory, Licensing and Monitoring, Information Technology, and Risk Management. This study also targets members of the public, focusing on individuals who work as risk management practitioners, cybersecurity professionals, internal auditors, those involved in governance, risk, and compliance, and employees in cybersecurity companies. The criteria for participants who possess the required expertise and knowledge are crucial to providing meaningful and relevant information for the study objectives.

Research Sample

This study uses purposive/judgmental sampling (non-probability), where participants were selected based on their knowledge and expertise in risk management, cybersecurity, internal audit, governance, risk and compliance, and risks associated with the telecommunications industry, typically categorized as cybersecurity risks. The sample size for the study is 30 – 35 respondents.

Research Instrument

A survey is a quantitative research design that uses sample questionnaires to measure the characteristics of the population with statistical precision (Kinyua, 2023). The questionnaire survey serves as the tool for data collection and is divided into three sections, each aligned with achieving the research objectives. Written in English, Section 1 focuses on the demographic profile and uses a nominal scale. Section 2 employs a Likert-scale, which uses a five-level response format, while Section 3 provides a free text box for respondents to share their suggestions on risk communication strategies to enhance the practices.

Data Collection Procedure

Data collection for the study was between May 20 and May 31, 2024, involving 35 expert respondents from different organizations (e.g., telecom companies, regulatory

bodies, and cybersecurity firms) to participate. These experts were selected based on criteria determined for the purposive respondents discussed previously. The respondents reviewed and answered the research instrument online through the link given in the email. The online instrument was developed using Qualtrics. Thirty-three respondents returned the survey.

Data Analysis

Data was analysed using descriptive statistics.

RESULTS AND DISCUSSION

The number of respondents based on gender, age, job position, academic level, working experience, and category of telecommunication sector is presented in Table 1.

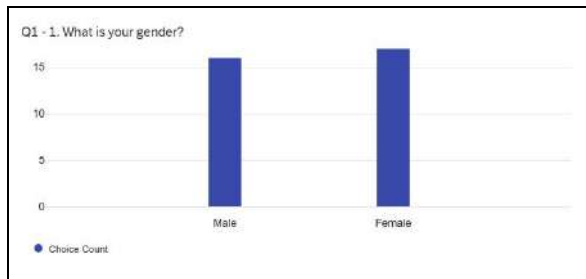
Table 1: Demographic Characteristic

No	Demographics Characteristics	Percentage	Count	
1	Gender	Male	48%	16
		Female	52%	17
2	Age	Under 25	3%	1
		25 – 35	18%	6
		36 – 45	45%	15
		46 – 55	30%	10
		56 – 65	3%	1
		Over 65	0%	0
3	Job Position	Top Management	3%	1
		Managerial Level	30%	10
		Senior Executive	42%	14
		Junior Executive	15%	5
		Non-Executive	9%	3
4	Education	PhD	3%	1
		Master	18%	6
		Bachelor	73%	24
		Diploma/Collage	3%	1
		Secondary	3%	1
5	Working Experience	More than 20	30%	10
		11 – 20	45%	15
		6 – 10	9%	3
		Less than 5	15%	5
6	Category	Employees of the telecommunication sector	24%	8
		Regulator of the telecommunication	9%	3

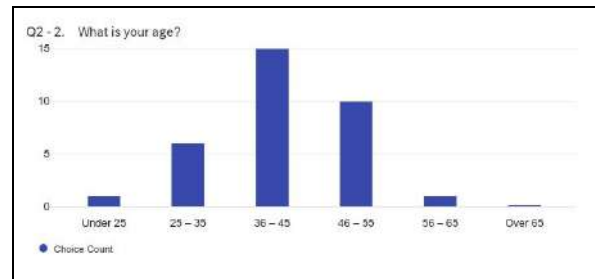
Based on Table 1, the number of female respondents is slightly higher than male respondents, with 17 (52%) female and 16 (48%) male. For the respondent's age, the majority age is between 36 – 46 (45%) with 15 respondents, age between 46 – 55 (30%) with a total of 10 respondents, age between 25 – 35 (18%) with 6 respondents, and age between 56 – 65 (3%) and under 25 (3%) both with 1 respondent.

For job positions, half of the respondents are senior executives with a total of 14 (42%), followed by managerial level 10 (30%), a junior executive with 5 (15%), top management 1 (3%), and non-executive with a total of 3 (9%). Education profile shows that the majority of respondents hold bachelor's with a total of 24 (73%), master's 6 (18%), while Phd, diploma, and secondary have the same total of 1 (3%). For the working experience, the majority of respondents had experienced between 11 – 20 years with a total of 15 (45%), followed by more than 20 years experience 10 (30%), less than 5 years with 5 (15%), and between 6 – 10 years with 3 (9%).

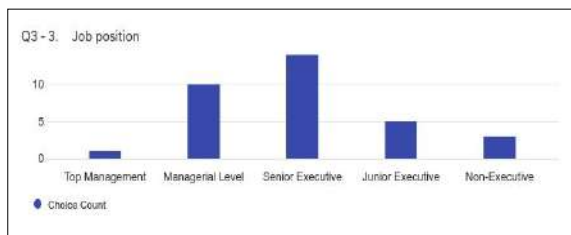
For the category of respondents, an expert from the public shows the highest with a total of 22 (67%), followed by telecommunication employees with 8 (24%), and regulator MCMC with 3 (9%). The following bar chart visualizes the demographic profile of the respondents.



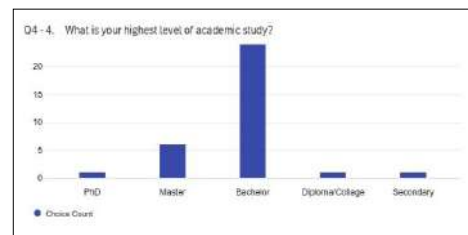
Gender



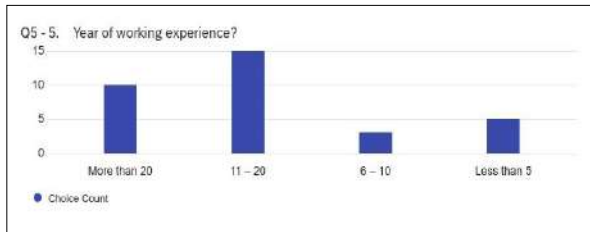
Age



Job position



Academic level



Working experience



Sector

Reliability Test Scores

The reliability of test scores is the extent to which they are consistent across different occasions of testing, different editions of the test, or different raters scoring the test taker's responses (Livingston, 2018; Segal & Coolidge, 2018). The scale's reliability increases with the degree of correlation between scores from repeated measurements. Cronbach's alpha was used to assess the reliability of each variable in this study. Alpha was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1 (Tavakol & Dennick, 2011; Dalyanto et al., 2021). Table 2 shows the reliability test score for the pilot study.

Table 2: Reliability Test

No	Main Variables	Number of Questions	Cronbach's Alpha
1	Define the Main Goal of Risk Communication	3	0.926
2	Message of Risk Communication	5	0.884
3	Communication Channel	3	0.583
4	Spoke Person	5	0.893
5	Communication Schedule	2	0.699
6	Feedback Mechanism	2	0.773
7	Training and Capacity Building	2	0.688
8	Incident and Continuity Training	2	0.929

All instrument constructs achieved a Cronbach's alpha coefficient of greater than 0.70 except for item number 3, 5, and 7. Items 5 and 7 are very slightly lower than the Cronbach's threshold. However, Cronbach's alpha for the overall set of 24 items in the Risk Communication Strategy was 0.958. Hence, the study decided not to remove the numbers 3, 5 and 7 and will retain all variables for the actual study by taking the overall reliability of the instrument of 0.958, indicating acceptable internal consistency for the entire set of items. Figure 2 shows the overall reliability of the instrument.

Figure 2: Reliability Statistic for All Items

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.958	.961	24

This decision was made to ensure the reliability of the study's results. By including these variables in the data analyses, the study intends to thoroughly analyze each variable's contributions to the research outcomes. Every variable is given the opportunity to demonstrate its significance within the larger context of the study. Therefore, items 3, 5, and 7 will undergo the same level of scrutiny as others to ensure a thorough examination of the analysis.

This decision is supported by the study of (Mun et al., 2015). Mun et al. (2015) developed an instrument called the Scientific Imagination Inventory to measure scientific imagination in students. They identified three main components of scientific imagination, each with two sub-dimensions, resulting in a total of six factors. These components and their factors are (i) Scientific Sensitivity (sub-dimension: Emotional Understanding and The Experience of Imagination), (ii) Scientific Creativity (sub-dimension: Originality and Diversity), and (iii) Scientific Productivity (sub dimension: Creation and Reproduction and Scientific Sense of Reality) (Taber, 2018). The results showed that the overall instrument the overall reliability of the 20-item instrument was high ($\alpha = 0.79$). The reliability of individual components and factors was generally lower. Several factors have alpha values below the acceptable threshold of 0.70 which are Scientific Sensitivity: $\alpha = 0.67$, Scientific Creativity: $\alpha = 0.55$, and Scientific Productivity: $\alpha = 0.62$. Generally, based on the analysis focus, despite the lower reliability scores for individual components and factors, the authors highlighted the overall alpha of 0.79 as the primary measure of reliability. This suggests emphasizing the overall consistency of the 20-item instrument rather than the reliability of its sub-components in their analysis findings. Cronbach's alpha is most valuable for indicating scale reliability in the sense of the equivalence of items within single-construct scales, but the statistic does not offer any indication that scales are actually unidimensional (Taber, 2018).

Additionally, these variables are considered important based on theoretical foundations and analysis in the literature review. They remain practically significant to the study and might be influenced by the number of items or size of the pilot study. Sijtsma (2009) argued that all that alpha can reveal about the "interrelatedness of the items" is their average degree of "interrelatedness" provided there are no

negative covariances and keeping in mind that alpha also depends on the number of items in the test.

Descriptive Statistics

Table 3 shows the descriptive statistics of the level of agreement and trust for each risk communication strategy.

1. For “Define the Main Goal of Risk Communication”, the majority of respondents indicated an overall level of agreement (70%) and trust (63%) on a scale of 5.
2. For “Message of Risk Communication”, the majority of respondents indicated an overall level of agreement (64%) and trust (63%) on a scale of 5.
3. For, “Communication Channel”, the majority of respondents indicated an overall level of agreement (60%) and trust (48%) on a scale of 5.
4. For “Trusted Messenger/SpokePerson”, the majority of respondents indicated an overall level of agreement (53%) and trust (49%) on a scale of 5.
5. For “Risk Communication Schedule”, the majority of the respondents indicated the overall level of agreement (51%) and trust (49%) on a scale of 5.
6. For “Feedback Mechanism”, the majority of respondents indicated an overall level of agreement (50%) on a scale of 5 and an overall level of trust (42.5%) on a scale of 4 and 5.
7. For “Provide Training and Capacity Building”, the majority of respondents indicated an overall level of agreement (47%) and trust (48%) on a scale of 4.
8. For “Training on Emergency and Continuity Plan”, the respondents indicated an overall level of agreement (56%) and trust (48%) on a scale of 5.

The results suggest a positive response towards all risk communication strategies and consistency in the impact on trust.

Table 3: Descriptive Statistic for Level of Agreement and Trust of Risk Communication Strategies

Risk Communication Strategies	Level of Agreement							Level of Trust						
	1	2	3	4	5	Mean	Standard Deviation	1	2	3	4	5	Mean	Standard Deviation
1. Define The Main Goal of Risk Communication														
Defining goals can align different stakeholder's expectations.	0 (0%)	0 (0%)	2 (6%)	9 (27%)	22 (67%)	4.61	0.60	0 (0%)	0 (0%)	3 (9%)	13 (39%)	17 (52%)	4.42	0.65
Defining goals delivers the right information to the right stakeholders and avoids confusion.	0 (0%)	0 (0%)	2 (6%)	9 (27%)	22 (67%)	4.61	0.60	0 (0%)	0 (0%)	2 (6%)	10 (30%)	21 (64%)	4.58	0.60
Defining a clear goal helps stakeholders understand the purpose of the communication efforts.	0 (0%)	0 (0%)	2 (6%)	6 (18%)	25 (76%)	4.70	0.58	0 (0%)	0 (0%)	2 (6%)	8 (24%)	23 (70%)	4.64	0.59
Overall	0%	0%	6%	24%	70%	4.64	0.59	0%	0%	7%	31%	63%	4.55	0.61
2. Message of risk communication														
The message should be transparent, open, and honest.	0 (0%)	0 (0%)	2 (6%)	11 (33%)	20 (61%)	4.55	0.61	0 (0%)	0 (0%)	3 (9%)	9 (27%)	21 (64%)	4.55	0.66
The message should be consistent over time.	0 (0%)	0 (0%)	4 (12%)	10 (30%)	19 (58%)	4.45	0.70	0 (0%)	1 (3%)	3 (9%)	10 (30%)	19 (58%)	4.42	0.78
The message should use credible sources.	0 (0%)	0 (0%)	3 (9%)	10 (30%)	20 (61%)	4.52	0.66	1 (3%)	0 (0%)	4 (12%)	8 (24%)	20 (61%)	4.39	0.92
The message should be clear, accurate, and understandable.	0 (0%)	0 (0%)	1 (3%)	6 (18%)	26 (79%)	4.76	0.49	0 (0%)	1 (3%)	2 (6%)	4 (12%)	26 (79%)	4.67	0.72
The message should have ownership that is responsible for the information shared, mistakes or errors.	0 (0%)	2 (6%)	2 (6%)	9 (27%)	20 (61%)	4.42	0.85	1 (3%)	1 (3%)	3 (9%)	10 (30%)	18 (55%)	4.30	0.97
Overall	0%	1%	7%	28%	64%	4.54	0.66	1%	2%	9%	25%	63%	4.47	0.81
3. Communication Channel														
Various channels including websites, apps, social media, email, or press conferences	0 (0%)	3 (9%)	5 (15%)	8 (24%)	17 (52%)	4.18	1.00	1 (3%)	3 (9%)	5 (15%)	11 (33%)	13 (40%)	3.97	1.09

Risk Communication Strategies	Level of Agreement							Level of Trust						
	1	2	3	4	5	Mean	Standard Deviation	1	2	3	4	5	Mean	Standard Deviation
are used for communication channels.														
Different stakeholders may require different communication channels.	1 (3%)	0 (0%)	3 (9%)	10 (30%)	19 (58%)	4.39	0.89	1 (3%)	1 (3%)	4 (12%)	14 (42%)	13 (40%)	4.12	0.95
The message must be consistent across various communication channels.	0 (0%)	0 (0%)	3 (9%)	7 (21%)	23 (70%)	4.61	0.65	0 (0%)	1 (3%)	2 (6%)	9 (27%)	21 (64%)	4.52	0.74
Overall	1%	3%	11%	25%	60%	4.39	0.85	2%	5%	11%	34%	48%	4.20	0.92
4. Trusted Messenger/Spoke Person														
The trusted spokesperson should be credible to deliver the message to the public.	0 (0%)	1 (3%)	2 (6%)	7 (21%)	23 (70%)	4.58	0.74	0 (0%)	1 (3%)	2 (6%)	8 (24%)	22 (67%)	4.55	0.74
The trusted spokesperson should be able to build the trust.	1 (3%)	0 (0%)	2 (6%)	11 (33%)	19 (58%)	4.42	0.85	2 (6%)	0 (0%)	2 (6%)	11 (33%)	18 (55%)	4.30	1.03
The trusted spokesperson must be experienced to ensure clear and straightforward communication.	0 (0%)	0 (0%)	3 (9%)	12 (36%)	18 (55%)	4.45	0.66	1 (3%)	0 (0%)	3 (9%)	16 (48%)	13 (40%)	4.21	0.84
The trusted spokesperson simplifies technical information to ensure customers understand the risks.	0 (0%)	2 (6%)	2 (6%)	10 (30%)	19 (58%)	4.39	0.85	1 (3%)	1 (3%)	2 (6%)	13 (40%)	16 (48%)	4.27	0.93
Different trusted spokespersons may be required for various risk communication needs.	0 (0%)	0 (0%)	7 (21%)	17 (52%)	9 (27%)	4.06	0.69	0 (0%)	0 (0%)	8 (24%)	15 (46%)	10 (30%)	4.06	0.74
Overall	1%	2%	10%	34%	53%	4.38	0.76	2%	1%	10%	38%	49%	4.28	0.86
5. Risk Communication Schedule														
The risk communication schedule must be established to determine the time and frequency of communication.	0 (0%)	1 (3%)	2 (6%)	14 (42%)	16 (48%)	4.36	0.73	1 (3%)	0 (0%)	2 (6%)	16 (48%)	14 (43%)	4.27	0.83
The risk communication should be prompt, particularly during a network breach or critical situation	0 (0%)	0 (0%)	3 (9%)	12 (36%)	18 (55%)	4.45	0.66	2 (6%)	1 (3%)	4 (12%)	8 (24%)	18 (55%)	4.18	1.14
Overall	0%	2%	8%	39%	51%	4.41	0.69	5%	2%	9%	35%	49%	4.22	0.99

Risk Communication Strategies	Level of Agreement							Level of Trust						
	1	2	3	4	5	Mean	Standard Deviation	1	2	3	4	5	Mean	Standard Deviation
6. Feedback Mechanism/Medium														
Feedback mechanisms like surveys, social media, or hotlines improve service quality by addressing stakeholders' concerns.	0 (0%)	1 (3%)	3 (9%)	14 (43%)	15 (46%)	4.30	0.76	1 (3%)	0 (0%)	5 (15%)	17 (52%)	10 (30%)	4.06	0.85
Analyzing feedback enhances the risk communication program.	0 (0%)	0 (0%)	3 (9%)	12 (36%)	18 (55%)	4.45	0.66	1 (3%)	0 (0%)	3 (9%)	11 (33%)	18 (55%)	4.36	0.88
Overall	0%	2%	9%	39%	50%	4.38	0.71	3%	0%	12%	42.5%	42.5%	4.21	0.87
7. Provide Training and Capacity Building														
Stakeholders can be trained about risks through various channels like conferences, forums, websites, and more.	0 (0%)	0 (0%)	2 (6%)	16 (48%)	15 (46%)	4.39	0.60	1 (3%)	0 (0%)	3 (9%)	16 (48%)	13 (40%)	4.21	0.84
Training increases stakeholders' awareness and readiness for potential risks.	0 (0%)	1 (3%)	2 (6%)	15 (45.5%)	15 (45.5%)	4.33	0.72	0 (0%)	0 (0%)	4 (12%)	16 (48%)	13 (40%)	4.27	0.66
Overall	0%	2%	6%	47%	45%	4.36	0.66	2%	0%	10%	48%	40%	4.24	0.75
8. Training on Emergency and Continuity Plan														
Training in emergency, BCP, DRP, crisis management, and simulations boosts employee skills and readiness for potential risks	1 (3%)	0 (0%)	3 (9%)	10 (30%)	19 (58%)	4.39	0.89	1 (3%)	1 (3%)	3 (9%)	12 (36%)	16 (48%)	4.24	0.95
Training enhances company resilience to risks.	0 (0%)	1 (3%)	3 (9%)	11 (33%)	18 (55%)	4.39	0.78	1 (3%)	0 (0%)	4 (12%)	12 (36%)	16 (48%)	4.27	0.90
Overall	2%	2%	9%	31%	56%	4.39	0.84	3%	2%	11%	36%	48%	4.26	0.93

Suggestion on Risk Communication Strategy

A total of 27 respondents suggested additional risk communication strategies. The feedbacks were analysed thematically and grouped into 2 categories, which are (i) Enhancing Current Practice and (ii) Proposed New Risk Communication strategy.

Table 3: Respondent Suggestions on Risk Communication Strategy

Enhancing Current Practice	
Message of risk communication	<ol style="list-style-type: none"> 1. Language and Accessibility - provide information in multiple languages to reach non-English speaking populations and ensure communications are accessible to people with disabilities, including providing materials in Braille, audio formats, and sign language. 2. Avoid comparisons between familiar risks and new risks, as they may seem flippant and insincere unless presented properly. 3. The risk communication plan build by an organisation shall made a benchmarking process with the same nature/ industry/ scale to align with the standards and being tested for further improvement. The risk communication process shall be simplified and less bureaucracy especially in the event of critical function and should be covered in BCM plan for plug and play process & inputs from someone expertise in strategic communication is crucial as well. 4. Properly identify and categorize target group of people based specific subset such as age, gender, academic background etc so that clearer message can be delivered in proper exercise with regards to the targeted group background. 5. Engage in two-way communication. 6. Don't easily give information to unknown people.
Communication Channel	<ol style="list-style-type: none"> 1. Communication at the right channel.
Trusted Person/Spoke Person	<ol style="list-style-type: none"> 1. Designated spokesperson. 2. Involve the right people to understand how significant a risk is.
Training on Emergency and Continuity Plan	<ol style="list-style-type: none"> 1. Conduct procedure training frequently.
Feedback Mechanism	<ol style="list-style-type: none"> 1. Establishing a workshop or townhall with stakeholder could be one of medium in establishing feedback.
Provided Training and Capacity Building	<ol style="list-style-type: none"> 1. Conduct a regular webinar (pre-recorded) will be much helpful to the relevant stakeholders.
Training on Emergency and Continuity Plan	<ol style="list-style-type: none"> 1. Crisis communication training. 2. Training can be generic in nature offered by training centers. In terms of enterprise risk understanding, continuous awareness session which is curated to

	<p>internal needs is required, yearly/quarterly for better understanding and application.</p> <ol style="list-style-type: none"> 3. Encouraging a culture of risk-taking within an organization will result in a positive risk culture that can better handle uncertainties, leading to improved agility. 4. Sometimes "serious" activities may sound "pressure" to people. Perhaps might consider "more leisure" activities with the firm objectives to attract more people.
Proposed New Risk Communication Strategy	
<ol style="list-style-type: none"> 1. Continuously monitor the effectiveness of risk communication efforts for improvement. 2. Top-to-bottom approach to make it a compulsory exercise within the organisation. 3. Build a transparent, open and honest relationship between staff and employer as to avoid any miscommunication or secrecy between staff and employer. 4. Personality test to determine stress level and trust handling. 	

Discussion Findings

The findings from the study show a positive agreement among respondents on the overall risk communication strategy employed in the Malaysian telecommunication sector, which is categorized by a high level of agreement. It also shows that each strategy positively impacts trust, as indicated by a high level of trust

CONCLUSION

Risk communication is a vital part of risk management. A proper strategy should be established to communicate the risks such improper communication could impact the stakeholders. Based on previous studies on risk communication across various fields, it can be argued that effective risk communication significantly impacts stakeholders' trust and loyalty and enhances their understanding of associated risks, thereby aiding in their preparedness for any uncertainty. The study of the Malaysian context can enhance understanding of the influence of risk communication strategy on stakeholder trust in the telecommunication sector.

REFERENCES

- American Education Research Association (AERA), A. P. (1999). Standards for education and psychological testing., (p. 25).
- Benjamin, S., & Belluck, D. A. (1990, November). Risk Feedback: An Important Step in Risk Communication. *American Water Works Association (AWWA)*, 82(11), 50 - 55. doi:10.1002/j.1551-8833.1990.tb07052.x
- Chen, Y. (2023, March 21). Comparative Analysis of Risk Communication during COVID-19 Spread Period in Two Nations: China and Australia. *Highlights in*

Science, Engineering and Technology , Vol. 36. Retrieved from <https://doi.org/10.54097/hset.v36i.6199>

Clauberg, M., Börner, F., & Wiedemann, P. M. (2021). *Risk Communication For Company: Thriving and surviving in an age of risk*. Fischer Verlag.

Dalyanto, A., Sajidan, Siswandari, & Sukarmin. (2021). Developing instrument to measure entrepreneur skills of vocational school students based on sustainable development. *Journal of Physics*. doi:10.1088/1742-6596/1842/1/012025

Diallo, M. O., Aoki, S., Aoyama, T., & Watanabe, K. (2017, June 7). Evaluation of the effectiveness of modern communication channels during emergency situations. *WIT Transactions on the Built Environment* , 173, 131-142.

Ellis, L. D. (2018, January 5). *School of Public Health*. Retrieved from HARVARD T.H. CHAN: <https://www.hsph.harvard.edu/ecpe/>

FAO. (2020, August 3). *Risk communication and community engagement: : Coronavirus disease 2019*. Retrieved from Food and Agriculture Organization of the United Nations: <https://openknowledge.fao.org/server/api/core/bitstreams/52d0d4c3-3131-475a-acac-93628b539520/content>

Fernandez, P. R., Ng, K. H., & Kaur, S. (2019, June 1). Risk Communication Strategies for Possible Health Risks From Radio-Frequency Electromagnetic Fields (RF-EMF) Emission by Telecommunication Structures. *Health Physics*, 116(6), 835 - 839.

Haynes, S. N., Richard, D. C., & Kubany, E. S. (1995, September). Content Validity in Psychological Assessment: A Functional Approach to Concepts and Methods. *Psychological Assessment*, 7(3), 238 - 247. doi:10.1037/1040-3590.7.3.238

Höppner, C., Buchecker, M., & Bründl, M. (2012, November). Linking social capacities and risk communication in Europe: A gap between theory and practice? *Natural Hazards*, 64, 1753–1778. doi:10.1007/s11069-012-0356-5

Irwanti, M., Nuriman, D., Lestari, P., & Sigit, R. (2023). RISK COMMUNICATION STRATEGY IN DEALING WITH THE TSUNAMI DISASTER. *SIBATIK JOURNAL* , 2(2), 675 - 682.

Khan, S. (2017, May). COREDAR for Cities: Developing a Capacity Building Tool for Sea-Level Rise Risk Communication and Urban Community-Based

- Adaptation. *Springer International Publishing AG* , 137 - 157. doi:10.1007/978-3-319-53742-9_9
- Kumbasar, B. (2022). *Health Risk Communication and Media*. 189 - 205. doi:10.4018/978-1-6684-7145-6.ch011
- Leah, D., Janae, M., & Ashley, L. G. (2022, March 1). Are we ready? Operationalising risk communication and community engagement programming for public health emergencies. *BMJ Global Health*, 7 (3). doi:10.1136/bmjgh-2022-008486
- Livingston, S. A. (2018, January). Test Reliability—Basic Concepts. *Research Memorandum ETS RM-18-01*.
- Mun, J., Mun, K., & Kim, S.-W. (2015). Exploration of Korean Students' Scientific Imagination Using the Scientific Imagination Inventory. *International Journal of Science Education*, 3(13). doi:10.1080/09500693.2015.1067380
- Ng, K., & Hamby, D. (n.d.). Fundamentals for Establishing a Risk Communication Program. *Health Physics with permission from the Health Physics Society*.
- Petra, D., Thomas, A., Satyajit, S., Piotr, W., Sabrina, C., Franklin, A., & Ülla-Karin, N. (2016, April 7). Risk communication as a core public health competence in infectious disease management: Development of the ECDC training curriculum and programme. *European Centre for Disease Prevention and Control*, 21(14). doi:10.2807/1560-7917.ES.2016.21.14.30188
- Piet, S. (2008). Risk Communication: World Creation Through Collective Learning Under Complex Contingent Conditions. *Journal of Risk Research*, 11(1), 5-22. doi:10.1080/13669870701521248
- Regina, E. L., & Andrea, H. M. (2009). Set a Schedule. 127 - 132. doi:10.1002/9780470480120.CH11
- Renn, O., & Levine, D. (1991, January). *Trust and Credibility in Risk Communication*. Netherlands: Kluwer Academic Publisher. doi:10.1007/978-94-009-1952-5_10
- Reynolds, B. (2022). *Crisis and Emergency Risk Communication*. Centres for disease control and Prevention.
- Segal, D. L., & Coolidge, F. L. (2018). *Reliability*. SAGE. doi:10.4135/9781506307633.n683

- Sijtsma, K. (2009, March). ON THE USE, THE MISUSE, AND THE VERY LIMITED USEFULNESS OF CRONBACH'S ALPHA. *PSYCHOMETRIKA*, 74, 107 - 120. doi: 10.1007/S11336-008-9101-0
- Smillie, L., & Blissett, A. (2010, January). A Model for Developing Risk Communication Strategy. *Journal of Risk Research*, 13(1), 115 - 134. doi:10.1080/13669870903503655
- Soares, R., Jin, X. W., Spence, P. R., & Sellnow, T. L. (2023, February 23). Interacting arguments in crisis communication: The influence of message convergence on risk and crisis messages. *Journal of Contingencies and Crisis Management*, 31(3), 516-523. doi:10.1111/1468-5973.12456
- Taber, K. S. (2018, December). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(1), 1 - 24. doi:10.1007/s11165-016-9602-2
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 53 -55. doi:10.5116/ijme.4dfb.8dfd
- Victoria, P. F. (2006). Risk Communication: Communicating Risks as a Function of Good Risk Management. doi:10.2514/6.2006-4165
- Yong, V. K., Chua, T. H., & Ngah, R. (2021). Ensure public health safety, security, quality of service and smooth deployment of 5G infrastructure in Malaysia. *2021 IEEE Symposium on Wireless Technology & Applications (ISWTA)* (pp. 32 - 36). ResearchGate. doi:10.1109/ISWTA52208.2021.9587445

FROM DIRTY, DANGEROUS AND DIFFICULT TO DILIGENCE, DIGNITY AND DUTY: A WAY FORWARD TO REBRAND 3D SECTORS¹

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Abstract

Since the past 40 years, Malaysia has been depending on foreign workers to meet its workforce demand especially in 'dirty, difficult, and dangerous' or 3D sectors. This high dependency does not seem to decrease soon and the lack of involvement among the Malaysian workforce in these sectors may contribute to several issues such as social, security, economy, and the rights of workers. This article aims to address the identified challenges by suggesting some policy improvements notably in the elements related to human rights of workers such as safe working conditions, fair wages, decent working hours, cramped living conditions and many others. To achieve these objectives, the authors rely on qualitative library research which involves analysis of primary and secondary sources such as books, journal articles, newspaper reports, and legal documents. This article concludes that it is important for policymakers in Malaysia to implement changes and interventions by rebranding the 3D sectors from dirty, dangerous and difficult to diligence, dignity, and duty sectors. It is also important to other relevant entities such as business operators, non-governmental organisations, civil societies, human rights activists etc to do their parts in enhancing human rights compliance at the workplace especially in the 3D sectors. The more 'humane' nature of 3D sectors will help reduce the dependency on foreign workers in 3D sectors in the future and enhance the attractiveness of 3D jobs for the local workforce.

Keywords: 3D sectors, working conditions, foreign workers, rights of workers

INTRODUCTION

In Malaysia, the influxes of foreign workers have steadily increased since the 1980s when the government introduced export-based industry to boost the country's economy. Foreign workers or interchangeably referred to as migrant workers are vital segments of workforce in Malaysia especially in the so-called 'dirty, difficult, and dangerous' or 3D sectors. They are either immigrants or non-citizens who migrated to Malaysia to seek for employments. These people can consist of foreign workers with permits, illegal foreign workers, refugees, and political asylum seekers (Hamzah &

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Daud, 2016). However, it is difficult to have an accurate number of foreign workers in Malaysia, since there are undocumented and illegal foreign workers who are working in this country in addition to the documented workers. According to a statement by the Minister of Home Affairs Datuk Seri Saifuddin Nasution Ismail on 18 October 2023, the projected number of foreign workers in Malaysia has currently reached 2,730,153, exceeding the target previously set by the Ministry of Economy in the 12th Malaysia Plan (Ismail, 2023). These foreign workers are mostly employed in Malaysia's critical sectors/sub-sectors which have always been associated with 3D sectors.

Despite the rising trend of foreign workers recorded every year especially in 3D sectors, there remains unanswered question of how long will Malaysia depend on these foreign workers while many of its own youngsters are stuck in a jobless rut? Finding answers to this question is therefore important to ensure that in the future the country will no longer depend heavily on foreign workers to work in the 3D sectors. In addition, the persistent challenges underlying foreign workers which include social, economic and security concerns as well as labour rights issues such as of exploitation, human trafficking, working condition etc have all reinforced the need to improve the current policies implemented by government and current practise in local 3D sectors. This brings to the objective of this article that is to address the identified challenges by proposing policy pathways and improvements, focusing notably on the realms of working conditions and workers' rights. This will 'humanise' the 3D sectors and rebrand them from 'dirty, difficult and dangerous' to 'diligence, dignity and duty' sectors'

METHODOLOGY

To achieve the objective of this article, the authors have employed a qualitative analysis based on library research method by analysing primary and secondary sources. This includes the existing literature in the forms of books, journal articles, newspaper reports, government policies, key statistics, and findings in academic research as well as the statements by industrial players. This article will first provide an overview of 3D sectors in Malaysia, followed by an analysis on the problem statements which include the dependency on foreign workers, lack of involvement among Malaysian workforce and some prevalent challenges. Having identified these challenges, this article finally summarises its findings by outlining the policy improvements, recommendations and call for action.

DISCUSSION

A. 3D Sectors in Malaysia: An Overview

The 3D sector is an abbreviation for the infamous 'dirty, dangerous and difficult' jobs and employments which mainly covers various sectors such as construction, manufacturing, agriculture, plantation, cleaning services, and automotive

maintenance. Very limited number of locals prefer to work in these sectors largely due to negative perception that most Malaysians have on these jobs (Ahmad et al., 2018). According to Malaysian Employers Federation (MEF), most Malaysians refuse to work in 3D sectors due to lack of social acceptance, not the salary. Hence, it is necessary that such menial jobs be enriched and rebranded to attract more locals, particularly the youth (Bardan, 2020). Malaysians typically avoid working in sectors like agriculture or any industry that involves manual labour not because of the low wages but because society does not view them as highly respected career choices. The 3D jobs are looked down socially and people doubt the 3D jobs are given any recognition (Kumar, 2016). These jobs were also seen as temporary in nature, not sustainable and no clear career path. There is a stigma on the jobs such as in construction or cleaning services as being less glamorous or low class. This perception is encouraged by society's attitude towards people who perform those jobs. Their employers pay them low wages and do not provide them with humane working environments. These poor and unencouraging working condition have caused the society to look down on them (Ng., 2016).

In addition, the nature of work in the 3D sectors are rough and needs more physical strength which most Malaysians are not interested in as compared to working in air-conditioned office and comfortable working environment. The fact that many Malaysians are not willing to perform 3D jobs has contributed to the country's dependency on the foreign workforce. Most foreign or migrant workers, having left their home countries to find employment with better pay in Malaysia, are commonly ignored of their basic rights by their employers. They are 'forced' to accept this situation to ensure their employment's 'survival' in Malaysia. Many employers have taken advantage of foreign workers' vulnerable nature by exploiting them and to a certain extent, violating their basic rights as employees. Although the laws of Malaysia do not discriminate against migrant workers, in practice, the rights of migrant workers are not fully protected. The employment laws are not sufficient in ensuring the compliance of employees' basic human rights by the employers. The employers in construction and plantation industries, for example, do not provide a safe and healthy working environment to their employees. If any casualties occurred, they are not covered by insurance scheme. This is clearly a violation of their rights and employees. Migrant workers are also reported to be underpaid and overworked (Ahmad et al., 2018).

B. Government Policy on Foreign Workers

Malaysia has officially introduced the policy to permit foreign workers to work in the country since the early 1970s. Initially, the implementation of this policy was meant to be an interim solution to the increasing demand for low-skilled labour due to the government's focus on industrial development strategy at that time. However, low-skilled foreign labour has instead become a prevalent feature of Malaysia's economy until today (Solomon, 2020). Currently there are 15 countries allowed to supply

workers to Malaysia namely Indonesia, Bangladesh, Nepal, Myanmar, India, Vietnam, Philippines, Pakistan, Thailand, Cambodia, Sri Lanka, Laos, Turkmenistan, Uzbekistan, and Kazakhstan (Mohamed Razali et al., 2023).

Realising that the dependency on foreign workers shall have implications to the country, Malaysian Government has from time to time implemented various policies and regulations to manage issues related to foreign workers. Generally, the Malaysian Government's policy on foreign workers is influenced by four main macro factors, namely, security, socio-culturalism, economic interests, and the rights of workers. The 11th Malaysia Plan states that the percentage of foreign workers in the workforce will be capped at no more than 15% in 2020. This target will be achieved through the automation of labour-intensive activities and migration to knowledge-intensive activities in all sectors of the economy, especially agriculture, manufacturing and construction sectors that employ more than 30% of foreign workers based on the book RMK-11 published in 2015.

Nevertheless, a report by the Department of Statistics Malaysia indicated that there are three sectors of employment of foreign workers recorded a percentage exceeding the target of 15 percent employment of foreign workers, namely construction (25.8%) followed by manufacturing (24.5%) and agriculture (70.8%).² These figures indicated that there is a need for the government to increase efforts to avoid over-dependence on foreign workers. This can be done by enhancing transparency and efficiency in foreign labour acquisition which will help push the country into not only acquiring quality talents but also fostering local skills improvement. Apart from use of automation in certain sectors, encouraging more local youth to enrol in Technical and vocational Education and Training (TVET) are steps in the right direction in reducing reliance for foreign labour (Annuar & Nehru, 2024).

C. Lack of Involvement Among Malaysian Workforces

The high dependency on foreign workers in 3D sectors has led many to believe that the main reason for the scenario is due to the reluctance by Malaysians themselves to fill in the demand in these sectors. On the contrary, some have suggested that this perception is erroneous considering that there are many Malaysians working abroad in 3D sectors such as in Singapore. This reflects that it is not the case that Malaysians are reluctant to work in the sector (Loshana, 2016). An overview of existing literature points towards several factors that contribute to lack of number of Malaysian working in local 3D sectors.

First, naturally, for the locals, the availability of job options, mobility factor and matter of convenience allow them to avoid the difficult, dangerous and dirty jobs (Marhani et al., 2012). A study by World Bank (2013) on the Malaysian policy on Immigrant Labour suggests that enough Malaysian workers are highly mobile across

² The calculation was done on data from the Immigration Department of Malaysia (JIM) (employees using temporary employment pass by sector up to 31 December 2020) and the Department of Statistics Malaysia (DOSM).

industries mainly to opt for better salary, economic opportunities, and work condition including the use of modern technology and facilities (Ibrahim, 2018). The fact that many Malaysians working in overseas such as in Singapore and Australia in 3D jobs is due to the options that they have, mobility and higher wages (Loshana, 2016; Aris, 2018). This scenario opens for labour shortages in 3D job sectors locally which created demand for foreign workers especially unskilled workers.

Second, the greater opportunity and mobility that the locals enjoy is mainly due to their higher education level compared to the foreign workers already in the industry (Marhani et al., 2012). A study found that the presence of foreign unskilled workers allows Malaysians to invest in their own education and enables them to work in high-skilled occupations (World Bank, 2013). Contrary to the perception that foreigners replace local workers leading to job losses among the locals, immigration has in fact generate jobs for the locals by reducing the costs of production which lead the local firms to be more competitive in the global market, allowing them to expand and hence increasing demand also for Malaysian workers. This is especially true for local workers with middle and high levels of education who are not impacted by the presence of immigrants. However, it is admitted that the immigration did have negative effect on the locals of the lowest educated groups whose opportunities are filled in by the immigrants.

In addition, the status of job is another important variable suggested by some (Zuher, 2016). The 3D jobs are less attractive socially and people doubt the 3D jobs are given any recognition. The unpopular reputation of these jobs is due to the social stigma of being looked down on and the portrayal of a bad image. It was seen as jobs that have unclear career path and not financially sustainable. Some of the jobs may only last for few years, temporary in nature and thus does not guarantee a better future for employees. Poor and harsh environments have made these sectors further unfavourable in the eyes of Malaysians. Hence, these empty positions have been filled by foreign workers who are willing to take up riskier jobs because of the availability of these jobs, and they tend to have lower incomes and less wealth than the locals (Sh Said, 2022).

Finally, jobs in the local 3D sectors, mainly the low skilled, offer lower salary compared to the risks that they carry (Kumar, 2016). Despite being indicated earlier in this article that salary was not the main reason that keeps away Malaysians from 3D jobs, but it has to be admitted that the salary paid to the workers is important variable for choice of work and good salary pay would not hinder Malaysians from working in the sector (Loshana, 2016). This was the one of the main motivations behind the willingness of Malaysians to work in 3D sectors in foreign countries such as Singapore and Australia. Apart from this, the working environment is another important variable in the choice of job especially for locals who have greater option. Poor working condition, long and odd hours as well various safety and health issues which are prevalent in these sectors are the other push factors for the locals (Trakic, 2010). A considerable number of injuries and accidents at workplace hinder the locals to opt for the sectors (Amnesty International, 2010).

D. Challenges

Among the primary challenges facing foreign workers employed in Malaysia's 3D industries are legal ones, which might involve infringement on their fundamental rights as workers. The rights of migrant workers are rarely completely safeguarded in practise, even though Malaysian laws do not discriminate against them. Employers' adherence to fundamental human rights is not sufficiently ensured by employment laws. For instance, businesses in the construction and plantation sectors fail to offer a safe and healthy work environment for their workers. If there are casualties, insurance plans do not cover them, and this is a clear violation of employees' rights (Ahmad et al., 2018). It is also reported that migrant labourers are overworked and underpaid. Furthermore, the absence of appropriate documents and other legal concerns frequently affect foreign workers in Malaysia, leaving them open to exploitation by authorities and employers (International Organization for Migration (IOM), 2023).

In short, the underlying concerns relating to foreign workers who have dominated 3D sectors in Malaysia are non-compliance of workers' rights, exploitation by employers and poor or unsafe working conditions, all of which have contributed to Malaysians' reluctance to work in 3D sectors. The prevalence of forced labour, unpaid wages, lack of rest days, coupled with unhygienic and cramped living conditions have led to humans being treated like commodities. Surprisingly, some 91.1 per cent or 1.4 million foreign workers in Malaysia are provided with accommodation that does not comply with provisions in the Workers' Minimum Standards of Housing and Amenities Act 1990 or Act 446 (Saravanan, 2020). This is exacerbated by the lack of education, language barriers and limited access to institutions, which means migrant workers are trapped in a vicious cycle of exploitation. The rise of gig economy and hybrid/flexible working hours have shaped the modern workplace in the post-pandemic era. The perception is that manual labour is reserved for poor migrant workers or underprivileged people, who require only low levels of skills to perform these jobs (Sh Said, 2022). Due to these legislative obstacles, foreign workers in Malaysia have unfavourable working circumstances and are more susceptible to abuse and exploitation at the hands of their employers. Malaysia's reliance on foreign labour for the 3D industries is partly a result of the absence of adequate legislative protection for these workers (Ahmad et al, 2018; Mohd Najib et al, 2019).

The second issue is the problem of the influx of immigrants in this country may lead to a drastic increase in crime rates, especially in times of economic challenges facing the country. This will inevitably happen when foreigners end up being unemployed with no income to cover their cost of living. Media reports had in fact recorded that the crime rate involving foreigners was recorded at 42,451 cases in 2016 to August 2019, according to the Ministry of Home Affairs (KDN). The Ministry had also recorded that a total of 12,647 cases involved theft, 11,862 cases of burglary and 4,822 cases from motorcycle theft. Nevertheless, due to efforts of the Royal Malaysian Police, the overall crime index involving foreigners showed a decline from 13,110 cases in 2016 to 11,441 in 2017 and 10,751 in 2018 (Bashah, 2021).

Moreover, the foreign workers may also contribute to economic impacts. In certain situation, some of them have even started businesses in Malaysia, including grocery stores, roadside stalls or even stalls in the market. Admittedly and regrettably, the 'Ali Baba' practices among some locals have also contributed to the spread of foreign workers overstaying. If this trend continues, it will not be impossible that soon some industries will be dominated by foreigners and the Malaysians will end up seeking jobs from these foreigners (Bashah, 2021). In addition, the outflow of national currency at a high rate every month will be detrimental to the country in terms of currency exchange which could be carried out easily and quickly and offering cheap services. Based on media reports, almost RM5 billion of the country's money flows out through foreigners working for a year in the construction sector alone. Apart from that, the government would also have to incur a high cost of RM1.169 million for the purpose of detaining illegal immigrants within a day. This will indeed put a high burden on the country's finances and will threaten the economic growth of the country (Theng & Ng, 2018).

FINDINGS – THE WAY FORWARD

Based on the above discussion, it is acknowledged that the Malaysian government, through its relevant ministries and agencies, must review the effectiveness of the current policies, from time to time. Engagement with relevant stakeholders and policy research can be a good mechanism for government to gain feed backs from various perspectives to pave the way for policy pathways and improvements. Undeniably, the government must start working seriously on rebranding and transforming 3D sectors from 'dirty, dangerous and difficult' to 'diligence, dignified and duty' sector (Kwong, 2016). The government, employers and trade union need to look at the current job positions that offered in local job markets, especially the so-called 3D jobs, so that at the end of the day, it's no longer needed to have any jobs classified as 3D. In addition, it is believed that rebranding of these jobs may make them more attractive to locals and at the same time, reduce the dependency on foreign workers. For example, a rubbish collector can be rebranded as "hygiene associate", a gardener can be called a "landscape associate", and a bus driver as well as a security guard can be known as a "bus captain" and "auxiliary police" (Tang, 2022).

A. Policy Improvements

Rebranding 3D sectors by merely changing the name of the jobs may not be sufficient if no substantial transformation were made on the policies related to these sectors. Firstly, the wages' structure paid for the jobs in these sectors need to be reviewed and improved. The dangers and difficulties that come with working in the 3D industry are frequently not reflected in the wage structures that are in place. The belief that the pay is insufficient to compensate for the demanding nature of the work may discourage local workers. In order to increase the attractiveness and competitiveness of these jobs in the local labour market, salary discrepancies must be addressed. The first stage is

to perform a comprehensive analysis of the current wage structures in the 3D industries. This entails evaluating the wage in relation to industry norms, the cost of living, and the unique difficulties experienced by employees in these fields. To attract and keep local talent, wage must be raised to reflect these considerations. Some initiatives can be done, for example, by upgrading of skills and by creating a grade for these 3D jobs. Salaries and benefits must be in line with the grade levels and should match the increasing cost of living. A clear career progression plans, including salary increments is necessary to attract more Malaysians to work in these sectors.

Secondly, revaluation must be done on the regulations and policies relating to rights and welfare of workers in 3D sectors such as basic access to healthcare, reasonable working hours, insurance for undertaking risky jobs and fair wages. In addition, the same goes to the employees' right to safe working environment and living conditions of workers. The government must ensure the existing regulations are fulfilled by the industrial players. It is alarming that it was reported 91.1 per cent or 1.4 million foreign workers in Malaysia are provided with accommodation that does not comply with provisions in the Workers' Minimum Standards of Housing and Amenities Act 1990 or Act 446. Fortunately, this was discovered because enforcement activities were enhanced during COVID-19 pandemic. In this regard, the government must enforce the existing laws on the protection of human rights compliance at the workplace to improve the status of 3D workers. The low-class image of these jobs due to non-compliance of these rights needs to change so that they can be regarded as respectable careers. To this end, stricter punishment and regular enforcements must be implemented to ensure the errant employers are not left unpunished and freely make profits by exploiting their workers.

Thirdly, the government should provide the industry with the necessary support and incentives for automation and mechanisation. This can also be done by providing automation incentives to ensure small and medium enterprises (SMEs), especially micro enterprises, are given assistance to mechanise, automate, digitalise and adopt new technology in their operations. Moreover, it is important to those in the sector to continuously gain knowledge, especially in Technical, Vocational Education and Training (TVET), to gather experience and knowledge in becoming highly skilled workers. Those who were trained in the TVET sector had higher work productivity compared to those not from that field, in line with the country's desire (Ujang, 2023).

B. Recommendations

To ensure that all pathways for policy improvements are properly put in place, it is important that education and mindset of the community towards 3D sectors be changed. Government, industrial player, and employees must see these jobs as essential and vital to society and the country. The negative conceptualisation of the 3D sector needs to change in a developing nation like Malaysia. All jobs are clean and equally important. It is fundamental to rebrand the current jobs into something more interesting and palatable to the locals and significant to the society at large (Solomon,

2020). Without these jobs, there will be great losses to the country. Initiatives to rebrand 3D jobs and alter public attitudes can be supported by policies. Policy frameworks can help with media cooperation, education initiatives, and public awareness campaigns. This may help to change the unfavourable perceptions attached to these positions, increasing their appeal to the local labour market. Stricter rules can be enforced by policy changes to enhance working conditions in the 3D industries. This involves establishing guidelines for appropriate working hours, health, and safety. Local workers will find the work environment more attractive and secure if these policies are implemented and their compliance is monitored.

The problem of low wages in the 3D industry can be resolved by changing wage structures. Policies can be created to guarantee that pay is appropriate for the type of work, taking into account the risks and difficulties involved. This can close the pay disparity between the perceived difficulty of the work and the remuneration package, increasing locals' attraction to the jobs. Furthermore, worker rights and legal protections in the 3D industry can be strengthened by comprehensive policy changes. This may involve stipulations concerning equitable compensation, safeguards against exploitation, and healthcare accessibility. Through the formalisation of these rights in laws, the government can provide a structure that protects employees, provides a sense of security, and promotes community involvement.

Hence, it is recommended that specific policy changes which have been proposed earlier are implemented based on feasible strategies to avoid potential long-term negative impacts to the country. It is crucial for the government to have projection in the future that the dependency on foreign workers in 3D sectors be gradually reduced. However, policymakers and government cannot effectively make improvements without involvement of other relevant stakeholders. It is a collective responsibility of all related stakeholders such as the relevant government ministries/agencies, employees' unions, industrial players, non-governmental organizations (NGOs), social activists and others to ensure transformative change. With the support and cooperation from all related stakeholders, it is possible for Malaysia to build a sustainable future for 3D sectors. The shift towards a more 'humane' perception of 3D sectors holds the potential to reduce reliance on foreign workers in the future and make 3D jobs more appealing to the local workforce.

CONCLUSION

This article underscores the real and ongoing issues behind the employment in 3D sectors in Malaysia. Due to its nature of work and its working environment, the 3D sector has always been seen as less favourable job to the locals and therefore making way for massive influx of foreign workers to take up these vast jobs opportunities. Malaysia's substantial reliance on foreign labour in the 3D industry, as evidenced by the rising numbers, presents a serious concern. This calls into question the long-term viability of the current workforce model and highlights the need for targeted efforts to address the root causes of this dependency and foster an environment that draws

in local labour. Moreover, one of the issues that have been noted is the Malaysian workforce's low participation in 3D sectors. Malaysians have general poor opinion of 3D jobs, which is a result of societal views and difficult working conditions. The unfavourable impression turns into a significant obstacle, making locals reluctant to engage in this sector. It is essential to launch a thorough rebranding and perception-reshaping campaign for these positions to overcome this.

A systematic and comprehensive approach that addresses the negative perception as well as the more general problems of mobility and chances for skill development among the local workforce is necessary to address these complex challenges. By fostering an atmosphere where Malaysians are more likely to engage actively in 3D sectors, this all-encompassing plan seeks to lessen the country's significant reliance on foreign labour. To address the challenges at hand, Malaysian policymakers should adopt a comprehensive approach, implementing policy pathways and improvements. This involves addressing issues related to working conditions, labor rights, and the societal perception of 3D jobs. Over the years, the Malaysian government has introduced various policies and regulations to oversee the management of foreign workers. However, persistent challenges are evident, particularly in sectors where the percentage of foreign workers surpasses the targeted limits. It is imperative to continually adjust policies and ensure effective enforcement to overcome these challenges.

The article puts forth specific policy recommendations aimed at transforming 3D jobs. These include rebranding initiatives, equalising minimum wages, extending legal protections to domestic workers, enhancing workplace safety, and fostering international collaboration. By adopting these recommendations, Malaysia can work towards creating a more equitable and sustainable environment in its 3D sectors. Against the backdrop of these identified issues, this article underlines several policy pathways by reviewing salary structures, enhancement or human rights at workplace and the use automation. All the relevant parties such as the government and the employers must rebrand 3D sectors as a more respectable career that is based on diligence, dignity and duty which guarantees a better living and sustainable career path for the employees. Only by doing this, more Malaysians will have their confidence in the employment in these sectors. Hence, it is foreseeable that soon the country will no longer depend heavily on foreign workers to work in the 3D sectors.

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REFERENCES

- Adnan Trakic. 2010. *ILO's contributions in improving working conditions - an analytical approach*. Kuala Lumpur: Malayan Law Journal.
- Akmar Annuar & Veishnawi Nehru (2024 January 22). "Malaysia to enhance efficiency in foreign labour acquisition, empower local talents," *The Malaysian Reserve*, <https://themalaysianreserve.com/2024/01/22/malaysia-to-enhance-efficiency-in-foreign-labour-acquisition-empower-local-talents/>
- Amnesty International. 2010. *Malaysia: Trapped: The exploitation of migrant workers in Malaysia*. London: Amnesty International Publication.
- Ashley Tang (2022 May 6). "Rebranding needed for the 3D jobs," *The Star Malaysia*, <https://www.thestar.com.my/news/nation/2022/05/06/rebranding-needed-for-the-3d-jobs>
- Diyana Ibrahim (2018 November 22). "Tawaran gaji lebih tinggi tarik minat belia bekerja dalam sektor 3D – Kulasegaran," *Astro Awani*, <http://www.astroawani.com/berita-malaysia/tawaran-gaji-lebih-tinggi-tarik-minat-belia-bekerja-dalam-sektor-3d-kulasegaran-191761>
- Intan Suria Hamzah and Sity Daud. (2016). Implikasi Kemasukan Pekerja Asing di Malaysia: Suatu Tinjauan Awal. *Jurnal Sains Insani*, Vol. 01: 69-77. Penerbit Universiti Sains Islam Malaysia.
- International Organization for Migration (IOM). 2023. "Assessment Of Causes and Contributing Factors to Migrant Workers Becoming Undocumented In Malaysia", IOM. Geneva, https://www.iom.int/sites/g/files/tmzbd1486/files/documents/2023-08/english_undocumented-migrant-workers-report.pdf
- Iskandar Zulkarnain Mohd Najib, Rumaizah Mohd Nordin, Ezlina Mohd Ahnuar & Khalida Mohd Sukor. 2019. "Malaysian as the Component of Labour Force for Construction Industry in Malaysia," *MATEC Web of Conferences.*, <https://doi.org/10.1051/matecconf/20192661026601007>
- J, Solomon (2020 July 23). "Only higher wages can induce locals to do 3D jobs", *The Malaysian Reserve*, <https://themalaysianreserve.com/2020/07/23/only-higher-wages-can-induce-locals-to-do-3d-jobs/>
- Jamalee Bashah (2021 March 3). "The problem of foreign workers - Its cause and impact," *Astro Awani*, <https://www.astroawani.com/berita-malaysia/problem-foreign-workers-its-cause-and-impact-285744?>
- K. Shagar Loshana (2016 February 17). "600,000 Malaysians already in 3D sector, but not at home", *The Star Online*, <https://www.thestar.com.my/news/nation/2016/02/17/malaysians-3d-jobs/>

- Kamles Kumar (2016, February 17). "Malaysians shun '3D' jobs because of social stigma, not low wages, employers say", *Malay Mail Online*, <https://www.malaymail.com/news/malaysia/2016/02/17/malaysians-shun-3d-jobs-because-of-social-stigma-not-low-wages-employers-sa/1062173>
- M. Saravanan (2020 December 3). "Accommodation for more than 90 per cent of foreign workers not in compliance with Act 446", *Astro Awani*, <https://www.astroawani.com/berita-malaysia/accommodation-more-90-cent-foreign-workers-not-compliance-act-446-271397>
- Mohd Arif Marhani et. al. (2012). Dependency of foreign workers in Malaysian construction industry. *Built Environment Journal*, 9(1): 39-50.
- Nisar Mohammad Ahmad et. al. (2018). Malaysians' Reluctance to Work in Local 3D Sectors: A Preliminary Review. *The Journal of Social Sciences Research*, 4 (Special Issue), 220-223. <https://doi.org/10.32861/jssr.sp4.220.223>
- Nur Aimidiyana Zuher (2016 March 8). "Transform 3D sectors to lure more local workers, government told", *Bernama*, <https://www.mef.org.my/MEFITN/Bernama160308a.pdf>
- Nurul Azwa Aris (2018 October 20). "MTUC: Raise wages to attract local workers first, then go into automation", *Free Malaysia Today*, <https://www.freemalaysiatoday.com/category/nation/2018/10/20/mtuc-raise-wages-to-attract-local-workers-first-then-go-into-automation/>
- Rodziana Mohamed Razali et. al. 2023. *Penggajian Pekerja Asing: Pas Lawatan Kerja Sementara (PLKS) Di Semenanjung Malaysia: Rangka Dasar & Perundangan*. Nilai: Penerbit USIM Press.
- Saifuddin Nasution Ismail (2023 October 18). "Kenyataan Media Mesyuarat Jawatankuasa Bersama Antara Menteri Dalam Negeri Dan Menteri Sumber Manusia Mengenai Pengurusan Pekerja Asing Kali Ke-9 Bil. 3/2023", *Facebook KDN Malaysia*, <https://www.facebook.com/kementeriandalamnegeri/posts/pfbid04m1EXetFjrCEu7a3Hgyj6tsxkYKRawxcFPwQ6zVjGqu8fpAHg6ncLw2BuzsnfTCol>
- Scott Ng. (2016 February 17). "How to attract our youth to 3D jobs", *Free Malaysia Today*, <http://www.freemalaysiatoday.com/category/opinion/2016/02/17/how-to-attract-our-youth-to-3d-jobs/>
- Shamsuddin Bardan (2020 February 18). "Rebrand 3D Jobs for More Social Acceptance", *The Star*, https://thesun.my/local_news/rebrand-3d-jobs-for-more-social-acceptance-KH2018941#google_vignette
- Sheikh Ali Azzran Sh Said (2022 November 3). "Time to rebrand 3D sector", *The New Straits Times*, <https://www.nst.com.my/opinion/letters/2022/11/846283/time-rebrand-3d-sector>

Sylvester Fong Tshu Kwong (2016 March 31). "Rebrand 3D to mean Diligence, Dignity and Duty – Soppoa CEO", *The Borneo Post*, <https://www.theborneopost.com/2016/03/31/rebrand-3d-to-mean-diligence-dignity-and-duty-soppoa-ceo/#:~:text=KUCHING%3A%20The%20oil%20palm%20plantation,a%20duty%20to%20the%20country>

Tan Theng Theng & Allen Ng. (2018 October 15). "The Economic Impact Of Foreign Workers In Malaysia A Brief Econometric Investigation", *Khazanah Research Institute*, https://www.krinstitute.org/assets/contentMS/img/template/editor/Technical%20Note%203_KRI%20SOH2018.pdf

World Bank (2013 February 26). "Immigrant Labour", in *Proceedings of the Symposium on Manpower Issues in Key Sectors of the Malaysian Economy*, Institute of Labour Market Information and Analysis (ILMIA), Ministry of Human Resources Malaysia, The World Bank.

Zaini Ujang (2023 June 3). "Ministry aims to revamp 3D sector into high-income jobs", *The Star Online*, <https://www.thestar.com.my/news/nation/2023/06/03/ministry-aims-to-revamp-3d-sector-into-high-income-jobs>

PHYSIOCHEMICAL AND SENSORY ACCEPTANCE OF CATFISH-BASED KEROPOK LEKOR ADDED WITH OYSTER MUSHROOM

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Abstract

Keropok lekor is a popular Malaysian snack traditionally made using marine fish such as 'Selayang' (Decapterus punctatus) or 'Tamban' (Clupea fimbriata). Due to high demand and limited supply, the exploitation of African catfish (Clarias batrachus) has been explored. However, the mild flavour and earthy taste of catfish does not meet consumer preferences for keropok lekor. To improve product's acceptability, oyster mushroom (Pleurotus spp.) was incorporated into catfish-based keropok lekor formulations. This study investigated the effect of substituting different parts of oyster mushrooms on the physicochemical properties and sensory acceptance of the product. Three formulations of catfish-based keropok lekor were prepared: sample A (oyster mushroom stalk), sample B (oyster mushroom cap), and sample C (whole oyster mushroom). In terms of nutritional composition, sample B had the highest fat (0.68 %) and protein (7.22 %) contents, while sample A had the highest fiber (13.7 %) and carbohydrate (43.10 %) content. Texture profile analysis showed that sample A had the highest scores for hardness. On the other hand, sample C was found to have the highest value of springiness. The lightness (L) value decreased in sample C with the addition of whole oyster mushrooms. A 9-point hedonic scale test evaluating consumer preferences indicated that samples A and C were favoured in terms of appearance, taste, and overall acceptance.*

Keywords: *keropok lekor, catfish keropok lekor, oyster mushroom, texture profile analysis*

INTRODUCTION

Keropok lekor, a traditional fish-based product, is particularly popular on the East Coast of Peninsular Malaysia, especially in Terengganu and Kelantan. It is typically made by mixing marine fish meat, such as tamban and selayang, with sago flour and spices, and is usually fried and consumed with chili sauce. Due to the inconsistent supply of marine fish species, there has been a growing trend toward using freshwater fish, such as catfish, in the production of fish-based products.

Catfish, which has an appearance similar to an eel, often features a dark grey or black back and a white belly. Recent research has explored the use of catfish as a primary protein replacement for chicken or beef in various products, such as nuggets (Solichah et al., 2022), burgers (Abdel-Latif et al., 2021), and traditional Karak crackers (Yudhistira et al., 2019). However, in the context of keropok lekor production, the distinctive sweet fish flavor is crucial for consumer acceptability, and catfish flesh, which lacks this flavor and has a strong earthy smell, does not meet this requirement.

To address these issues, oyster mushrooms have been chosen as additional ingredient to the basic raw materials. Known for their umami flavor and fibrous meat-analogue structure, oyster mushrooms are compatible with meat-processed commodities (Kumar et al., 2017; He et al., 2020). The umami flavor of oyster mushrooms can enhance overall meal acceptability and make monosodium glutamate more palatable. Additionally, the incorporation of mushrooms has been successfully reported to increase the preference of selayang-based keropok lekor (Iqmal-Afifi et al., 2023).

This study investigates the addition of different parts of oyster mushrooms (stalk, cap, and whole mushroom) to catfish-based keropok lekor to improve the flavor of the product. The study examined the changes in the physicochemical properties and sensory preferences among the samples. The development of a healthier and more sustainable version of keropok lekor could have significant benefits for public health and the environment.

METHODOLOGY

Materials

A fresh African catfish (*Clarias Gariepinus*) approximately 150-200 gram per head with 30-40 cm long, and oyster mushroom were bought from Giant Supermarket (Bandar Baru Nilai). For making dough, Sago flour Cap Bintang (Cap bintang, Pulau Pinang), Tapioca flour (ABC, Thailand), a salt (Sungai Petani, Malaysia), sugar (CSR, Malaysia) and monosodium glutamate (Ajinomoto, Malaysia) were purchased in local supermarket nearby Bandar Baru Nilai, Malaysia.

Catfish and Oyster Mushroom Preparation

Approximately, 1 kg of freshly catfish was cleaned by removing the internal organ. Unlike other fish, catfish doesn't have scales, but its body is coated with slimy substance that requires washing with lime and vinegar, followed by flour rinsing to eliminate its earthy odour. The fish was then filleted by removing the inedible parts of the fish such as head, bone and only flesh was used in the production of keropok lekor. The fish fillet was minced in a food processor and the flesh is stored in -18°C prior use in keropok lekor formulation.

While for oyster mushroom, it was washed thoroughly using pipe water twice to remove mud, dirt, and foreign materials. Extra water was removed by squishing the mushroom using muslin cloth. The mushrooms was then blended according to their part, in food processor to get minced mushroom.

Keropok Lekor preparation

To make keropok lekor dough, minced catfish flesh, minced mushroom, sago flour, tapioca flour, monosodium glutamate, ice, salt and sugar (Table 1) was mixed and kneaded into a dough. The dough was divided into 200-gram balls, which was roll

into cylinders of the same shape to ensure that each of the keropok lekor is uniformly compact and can cook evenly. Typically, keropok lekor cylinders are 3 to 5 cm in diameter and 10 cm long. The rolled dough was then boiled in a pot at 100°C for approximately 10-15 minutes.

Table 1: Formulations for Catfish-Based Keropok Lekor

Ingredients	Formulation 1 (mushroom stalk)	Formulation 2 (mushroom cap)	Formulation 3 (whole mushroom)
Oyster mushroom (g)	25	25	25
Minced catfish flesh (g)	25	25	25
Tapioca flour (g)	17	17	17
Sago flour (g)	17	17	17
Ice (g)	7	7	7
MSG (g)	3	3	3
Salt (g)	3	3	3
Sugar (g)	3	3	3

Nutritional Composition

The determination of proximate composition of unfried catfish-based keropok lekor added with oyster mushroom were analysed using the Association of Official Analytical Chemists (AOAC) methods (AOAC, 2005). Moisture content was determined using a force draft oven (Binder, Germany). The weight loss during drying was taken as the weight of moisture content. For dry-ashing method to determine ash content, 1 gram of each sample was burns on an electric hot plate until it stops smoking. The crucibles containing the burnt samples was placed in a muffle furnace and heated for overnight at a temperature of 550 °C. The crucibles were allowed to cool before being weighed once again.

Crude protein of samples was determined using Kjeldahl apparatus. Sample with the weight of 1.0 g was put into digestion tube. After that, 1 tablet of Kjeldahl tab and 10 ml of sulfuric acid (H₂SO₄) were added into each digestion tube. The sample underwent digestion and distillation process. The percentage of crude protein indicates the total nitrogen percentage present in the sample was calculated by multiplying it with a conversion factor of 6.25. The fat content of samples were analyzed using Soxhterm method. The sample was weighed at 5 g into a pre-dried thimble and placed in a Soxhlet flask. Petroleum ether (90 ml) was added to the flask and heated for 2 hours. The flasks were then dried in an oven at 60 to 80°C to remove the solvent.

Carbohydrates was determined by substrating 100% with the total percentages of moisture, fats, protein, and ash. On the other hand, crude fibre of

catfish-based keropok lekor was determined using Gerhardt method. The pre-dried fibre bag and crucibles were weighted. Approximately 1 g of sample was put in fibre bag and soaked in petroleum ether and distilled water two times for each treatment. For instrument method, which was washing phase I, the sample was soaked in H₂SO₄, boiled gently for 30 mins, drained the acid, and rinsed with hot water. In washing phase II, for instrument method, the sample was soaked in potassium hydroxide (KOH) solution, boiled gently for 30 mins, drained the alkali, and rinsed with hot water. The sample was transferred to a crucible, weighed it, dried overnight at 105 °C, and reweighed. After that, the sample was incinerated at 600 °C for at least 4 hrs, then the crucible was weighed after cooling.

Texture Profile Analysis (TPA)

Texture Profile analysis (TPA) of keropok lekor was conducted using texture analyzer (TA-XT Plus Model, Stable Microsystems, Surrey, UK) following the method by Hayes et al. (2005). The texture profile of freshly boiled keropok lekor were compared. Parameters were set at load cell: 25 kg, compression platen: P.75, constant rate: 1 mm/s, trigger force: 10 g (2s), pre-test and post-test speed: 3 mm/s and return distance: 35 mm. The sliced of keropok lekor (2.5 cm thickness) was placed horizontally on the platform and compressed. Samples are subjected to hardness and springiness. Triplicates of keropok lekor samples were performed to determine the properties.

Colour Analysis

A calorimeter (Minolta spectrophotometer CM 3500d, Japan) is used to measure the colour of the freshly boiled keropok lekor and was indicated by lightness level (L*). The samples were prepared by mincing the keropok lekor into small particles and placing them in petri dishes.

Sensory Evaluation

The 9 point-hedonic scale was used to evaluate the sensory attributes (appearance, texture, taste and overall acceptability) of fried keropok lekor. Each sample was cut into 2.0 cm in size and placed in a transparent container which was labelled with 3-digit random code. Every panel was evaluated the samples in an individual booth in fully air conditioner room to avoid bias between panel. Panellists were also supplied with water for mouth rinsing between samples.

Statistical Analysis

All experiments data was presented in Microsoft Excel 2019 data processing software and performed by one-way analysis of variance (ANOVA) to compare the data at the significant difference, $\alpha=5\%$. The data also was examined in Minitab Software (Minitab 19). Tukey's test was used to performed at confidence of 95% ($P<0.05$).

RESULTS AND DISCUSSION

Nutritional Composition

Nutritional composition of boiled catfish-based keropok lekor samples added with different part of oyster mushroom is shown in Table 2. Sample A (oyster mushroom stalk) showed the lowest value of moisture content (49.89%) followed by sample B (oyster mushroom cap) and C (whole oyster mushroom), with a value of 50.69% and 50.81% respectively. Keropok lekor with whole oyster mushroom (sample C) was found to have the highest ash content among all the samples while sample B (oyster mushroom cap) showed the lowest value. These data indicating that the addition of different parts of mushroom in the keropok lekor did not influenced the moisture and ash contents significantly.

In term of crude fat content, sample B obtained the highest value, while keropok lekor added with stalk oyster mushroom (Sample A) showed the lowest value. Oluwafemi et al. (2016) stated that oyster mushroom stalk had the lowest fat content (1.48%) followed by oyster mushroom cap (1.55%) and whole oyster mushroom (1.50%). Stalk's primary roles are to support the cap and aid in the movement of nutrients. It has a lower fat content because chitin and fibrous materials rather than lipids, which store energy for dominate its structural structure.

The crude protein content of catfish-based keropok lekor added with cap (Sample B), stalk (Sample A) and whole oyster mushroom (Sample C) were 7.22%, 4.25% and 5.46% respectively. Protein content in cap mushroom showed as the highest (34.19%) compared to stalk (20.96%) and whole mushroom (30.48%). In the other hand, mushrooms are often referred to as valuable protein sources (Adebayo et al., 2017). As for fibre content, sample A got the highest value (13.7%) follow by sample C (7.11%) and sample B (4.41%). Oyster mushroom stalk contains higher fibre than the other parts of mushroom due to its composition of cellulose stem. The cellulose forms the bulk of its structure, aiding in rigidity and stability. This result was correlated with previous study from Oluwafemi et al. (2016) reported that crude fibre for the stalk mushroom is the highest (7.5%).

Sample C (whole mushroom) obtained the highest value for carbohydrate percentage (40.69%) in comparison to sample A (mushroom stalk) and sample B (mushroom cap) with a value 43.10% and 39.39% respectively. This result was inagreement with Oluwafemi and his co-reseahers (2016) findings where carbohydrate constituent in edible oyster mushroom cap with 52.9%, stalk with 61.8% and the whole oyster mushroom with 51.9%. The incorporation of flours (sago and tapioca) in the preparation of keropok lekor dough in this experiemnt might affect the carbohydrate content of the final products.

Table 2: Proximate Analysis of Catfish-based Keropok Lekor

Percentage (%)	Formulation of Keropok Lekor		
	Sample A (mushroom stalk)	Sample B (mushroom cap)	Sample C (whole mushroom)
Moisture	49.89±1.70 ^a	50.69±1.99 ^a	50.81±0.22 ^a
Ash	2.29±0.42 ^a	2.20±0.17 ^a	2.58±0.08 ^a
Crude Protein	4.25±0.22 ^b	7.22±0.37 ^a	5.46±0.15 ^c
Crude Fat	0.38±0.03 ^b	0.68±0.18 ^a	0.46±0.05 ^b
Carbohydrate	43.10±1.82 ^a	39.29±2.30 ^a	40.69±0.09 ^a
Crude Fiber	13.7±4.98 ^a	4.41±0.99 ^b	7.11±1.79 ^{ab}

Mean ± standard deviation values with different superscript letters in the same row are significantly different at $P < 0.05$.

Texture Profile Analysis (TPA) of Catfish-based Keropok Lekor

Out of all the quality and flavour, texture is the most significant property that affect the consumer acceptance to any food product available. A substance's texture is a property that comes from a mixture of its physical characteristics and is sensed by the senses of touch, sight, and hearing. Figure 1 provides the texture profile of catfish-based keropok lekor with substitution of different part of oyster mushroom including hardness and springiness properties. Hardness is an important factor that can be defined as force necessary to cause a material to undergo a specific deformation; the material's toughness, firmness, or resistance to deformation are usually used to quantify this force. Numerous processing variables, including the kind and quantity of materials, additives, heat treatment, and equipment employed, have an impact on texture profiles.

Based on Figure 1, sample A (oyster mushroom stalk) was found to be the highest in mean value of hardness (201.5 N), indicating the sample is the hardest among all the keropok lekor. The highest value might due to high fibre content in mushroom stalk as this mushroom part is composed with high fibre cellulose. This presumption is highly correlated ($R^2 = 0.940$) with the fiber content obtained in this study as sample A had the highest fiber content among all the samples.

Springiness quantifies the keropok lekor's ability to recover, indicating its internal structure and quality when forces were hire to it. In terms of springiness, from the result shown in Figure 1, catfish-based keropok lekor with whole oyster mushroom (sample C, 1.818) was not statistically the highest ($p > 0.05$) from sample B (oyster mushroom cap, 1.0243) and sample A (oyster mushroom stalk, 1.0457). The springiness data suggest that the addition of whole mushrooms to the keropok lekor formulation results in a product with a good elastic structure.

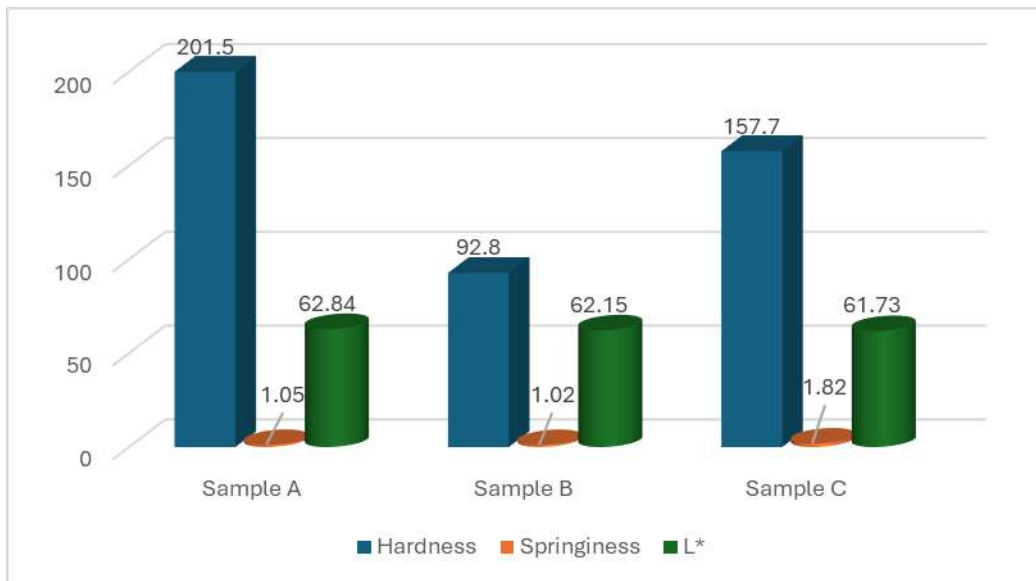


Figure 1: Textural Properties and “L” Values of Catfish-Keropok Lekor

Colour Analysis of Catfish-based Keropok Lekor

When it comes to judging the acceptability of people and quality of keropok lekor, colour also plays an important role for their first impression towards the keropok lekor. The brightness is represented by the degree of colour parameter L^* , where a value of 0 denotes black and a value of 100 denotes white. For L^* , the indicator colour for whiteness of the sample, the value in sample A (62.84) was significantly higher ($P < 0.05$) than in sample B (62.15) and the sample C (61.73) (Figure 1). Catfish flesh is primary white in colour as this fish is high in lipids and water-soluble proteins like myoglobin and haemoglobin (Yahya et al., 2020). Khatijah-Najihah et al. (2023) was reported that keropok lekor prepared using catfish flesh showed higher L^* values as compared to selayang keropok lekor indicating the former keropok lekor is lighter in colour as compared to the latter one. Furthermore, different part of oyster mushroom did not play a significant role in colour difference for catfish-keropok lekor due to insignificant ‘L’ values obtained.

Sensory Evaluation

Sensory evaluation provides useful information about consumer preferences, which aids in product creation and quality control. Generally, no significant difference was found between the keropok lekor added with different part of oyster mushroom (stalk, cap and whole mushroom) indicating the variable did not influence the sensory attributes evaluated. In terms of appearance attribute, sample C (whole mushroom, 7.250) scored as the highest in values than sample A (mushroom stalk, 6.750) and sample B (mushroom cap, 7.067) as shown in Figure 2. This is probably due to the dark colour of sample C as compared to the other samples which similar to commercial one. Furthermore, Shewfelt and Brückner (2000) assert that a product's colour and appearance can catch the eye of the customer and encourage

impulsive purchases. Consumers utilise visual elements to determine freshness and taste quality at the moment of purchase.

For texture attribute, sample A obtained the highest mean value (7.00) followed by sample C and sample B with mean value 6.93 and 6.55, respectively. Next attribute evaluated was a taste. Taste is the most crucial part for every kind of food. Both sample B and sample C were found to obtain the value of 7.100, while sample A showed to score with 6.633 value. This result gives a hint that oyster mushroom cap or the whole oyster mushroom using in keropok lekor making give the same taste to the consumer preferences. The umami taste of oyster mushrooms would contribute to the palatability of mono-sodium glutamate and the improvement of overall food acceptance (Jeng-Leun, 2005). The presence of free amino acids like glutamic, aspartic acid, 5'-ribonucleotides and some peptides related to umami taste that build up on the tongue (Sun et al., 2020).

Lastly, the overall acceptance of the catfish-based keropok lekor with substitution of different part of oyster mushroom showed that the sample C had the highest mean score of 7.283. As a whole, the sensory preference shows that panelists preferred catfish-based keropok lekor added with whole mushroom as indicated by the highest score obtained for sample C for appearance, taste and overall acceptability.

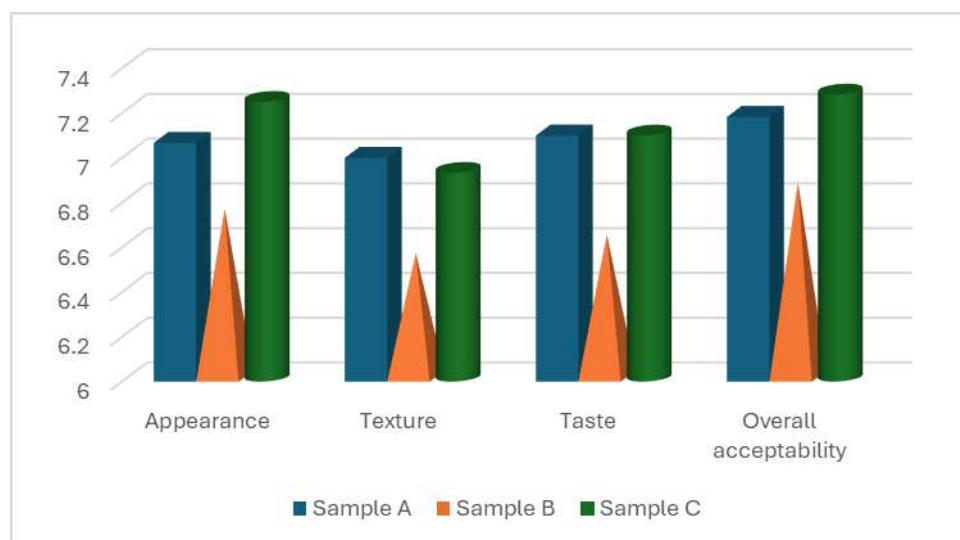


Figure 2: A 9-Point Hedonic Scale of Catfish-Based Keropok Lekor

CONCLUSION

Three formulations of catfish-based keropok lekor with different parts of oyster mushroom were prepared as follows: sample A (oyster mushroom stalk), sample B (oyster mushroom cap) and sample C (whole oyster mushroom). From the proximate, the addition of different part of oyster mushroom in keropok lekor formulations resulting in the significant changes for fat, protein and fiber contents.

While, moisture, ash and carbohydrates contents were not influenced by the mushroom part significantly. In texture profile analysis (TPA), the highest value of hardness was achieved by sample A (oyster mushroom stalk) probably due to high fiber content in this formulation. However, sample C (whole mushroom) showed good elasticity property indicating by the highest value in springiness. The addition of different parts of mushroom in keropok lekor was found to significantly affect lightness value. The 9-point hedonic scale scores indicated that consumers preferred sample C (whole oyster mushroom) as this sample obtained the highest score for appearance, aroma, taste and overall acceptability. All the samples also obtained scores higher than 6 (like very much). The findings suggested that addition oyster mushrooms in catfish-based keropok lekor has a great potential to be commercialized in the market and expand the market for this end product.

REFERENCE

- Abdel-latif, R. H., Kenawi, M.A. & Abdelaal, H.A. (2021) Effect of Moringa Leaves Powder on the Chemical, Microbial and Sensory Evaluation of Catfish Burger. *Assiut Journal of Agricultural Sciences*, 52 (1), 31-41.
- Adebayo, E. A. & Oloke, J. K. (2017). Oyster Mushroom (Pleurotus Species); A Natural Functional Food. *Journal of Microbiology, Biotechnology and Food Sciences*, 7(3) 254-264. <https://doi:10.15414/Jmbfs.2017/18.7.3.254-264>
- AOAC (Association of Official Analytical Chemists). Official Methods of Analysis, 18th ed. Washington D.C., Washington, 2005.
- He, J., Evans, N.M., Liu, H. and Shao, S. (2020). A Review of Research on Plant-based Meat Alternatives: Driving Forces, History, Manufacturing, and Consumer Attitudes. *Comprehensive Review of Food Science and Food Safety*, 19(5), 2639–2656. <https://doi.org/10.1111/1541-4337.12610>
- Ho, L. H., Asyikeen Zulkifli, N., & Tan, T. C. (2020). Edible Mushroom: Nutritional Properties, Potential Nutraceutical Values, and Its Utilisation in Food Product Development. *IntechOpen*. doi: 10.5772/intechopen.91827
- Iqmal-Afifi, L., Arifin, N., Huda-Faujan, N. & Ramly, N. (2023) Physicochemical Properties and Sensory Preference of Keropok Lekor with Partial Replacement of Fish Flesh with Oyster Mushroom. *Malaysian Journal of Science, Health, and Technology*, 9 (2), 128-135.
- Jeng-Leun, M. (2005). The umami taste of edible and medicinal mushrooms. *International Journal of Medicinal Mushrooms*, 7(1), 119–125. <http://doi.org/10.1615/IntJMedMushr.v7.i12.120>
- Khatijah-Najihah, R., Abdul Hamid, N.K., Huda-Faujan, N., Ramly, N. & Arifin, N. (2023) Physicochemical Properties and Sensory Acceptance of Catfish

Containing-Keropok Lekor. *The 3rd Virtual International Symposium on Sciences 2023*. 5-6 September 2023, 155.

- Kumar, P., Chatli, M.K., Mehta, N., Singh, P., Malav, O.P. & Verma, A.K. (2017). Meat analogues: Health Promising Sustainable Meat Substitutes. *Critical Review of Food Science and Nutrition*, 57 (5), 923–932. <https://doi.org/10.1080/10408398.2014.939739>
- Oluwafemi, I. G., Seidu, K. T., & Fagbemi, T. N. (2016). Chemical Composition, Functional Properties And Protein Fractionation Of Edible Oyster Mushroom. *Annals, Food Science and Technology*, 17(1), 218–222.
- Shewfelt, R. L., & Brückner, B. (2000). Fruit & vegetable quality: an integrated view. 144–157. CRC Press, Boca Raton, Florida
- Solichah, E., Iwansyah, A.C., Pramesti, D., Desnilasari, D., Agustina, W., Setiaboma, W. & Hermiani, A. (2022) Evaluation of physicochemical, nutritional, and organoleptic properties of nuggets based on moringa (*Moringa oleifera*) leaves and giant catfish (*Arius thalassinus*). *Food Science and Technology*, 42. DOI: <https://doi.org/10.1590/fst.72020>
- Sun, L. B., Zhang, Z. Y., Xin, G., Sun, B X., Bao, X. J., Wei, Y. Y., Zhao, X. M. & Xu, H. R. (2020). Advances in umami taste and aroma of edible mushrooms. *Trends in Food Science and Technology*, 96, 176–187.
- Yahya, F. H., & Ting, H. T. (2020). Effect of Different Ratios of Chicken Meat to Fresh Oyster Mushroom (*Pleurotus sajor-caju*) on the Physicochemical Properties and Sensory Acceptability of Sausages. *International Journal on Food, Agriculture and Natural Resources*. 1(1), 7–14. <https://doi.org/10.46676/ij-fanres.v1i1.2>
- Yudhistira, B., Affandi, D.R. & Artika, Y.K.P. (2019) Physical, chemical, and sensory characteristics of catfish karak crackers as nutrition value added. 4th International Conference on Tropical and Coastal Region Eco Development. *IOP Conf. Series: Earth and Environmental Science* 246 012047. doi:10.1088/1755-1315/246/1/012047

MISREPRESENTATION OF HADITH INTERPRETATION IN CONTENT BROADCASTING ON SOCIAL MEDIA: A YOUTUBE STUDY

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Abstract

Hadith knowledge has gained attention among the community, especially in the world of new media. It is increasingly being debated through various social media channels, causing various issues debated in academic field. Realizing the importance of the main reference for Muslims, posting content containing hadith online is often by uploading or sharing by content creators in various display styles on YouTube. Apart from statements or hadith quotes, there are some contents that is broadcast in the form of advertisements, debates, commentaries, enlightenments, explanations, or interpretation in various languages. The use of the facilities provided with positive information related to the hadith means following the hadith narration method is one of the noble efforts in spreading da'wah. While argumentation and interpretation based on the study of previous scholars can give an effect of appreciation in understanding a hadith. Not only does this increase the knowledge of Muslims about this main source, it also increases piety and faith. On the other hand, the use of YouTube that allows application activities without censorship of views or opinions of radical, fanatical or baseless arguments. The effect on the user (viewer) can result in confusion with the meaning of a hadith, even creating a real contradiction in understanding of a hadith. The purpose of writing this article is to identify the form of distortion of hadith interpretation in broadcasting on YouTube that can contribute to the misuse of hadith. This writing was produced through a qualitative method based on grounded theory, content and thematic analysis. The content of the data was collected through the library and also in the field (YouTube). This study and previous studies found that the distortion of the interpretation and meaning of the hadith posted on YouTube exists in various forms and varies. The researcher found that among the factors of hadith distortion are fame, religious riders, missionaries etc. The results of this study are expected to contribute to researchers in particular and Muslims in preserving the purity of the Hadith in order to maintain the integrity and harmony of the world.

Keywords: Distortion, misrepresentation, interpretation, misuse, hadith, fake news, new media, social media, YouTube, Content Code.

INTRODUCTION

Among the various social media applications that have special features such as the provision of content sites for message delivery through visual and audio recording methods of creative content interactively, YouTube is one of the main platforms that has appeal and is visited by many users around the world. The YouTube application has certain interaction characteristics for users either as viewers or as broadcasters. The sheer amount of activity on the most popular video-sharing platform in the world makes YouTube study worthwhile (Khan and Malik, 2022).

The dissemination of messages on YouTube can be broadcast and shared by the general public without borders. According to Khan and Malik, in the early days, the motive of sharing content on the platform was focused on drawing attention and appreciation from the audience, however, it is now geared toward fame and revenue generation. Consequently, YouTube has also focused on more monetization features apart from video ads and revamped how content creators develop and share media (Coromina et al., 2020). Various forms of messages are presented such as in entertainment, scientific, political, social and other contexts. The developer of the YouTube platform has set some basic conditions for users to upload content or access content that has been shared. Millions of videos have been gathered on the YouTube platform for viewing. However, the conditions provided by YouTube are not comprehensive according to the lifestyle of various races, religions or countries. Additional conditions need to be regulated and monitored by a country's government.

Based on the results of the study, the researcher found that the average visual content posted in relation to hadith has become a common habit for the audience to watch on YouTube. A variety of show options in the context of argumentation, interpretation, understanding of a hadith either in an acting display or a debate display or a typography display or a product advertising display related to a hadith. Analysis of YouTube videos can be challenging, especially because videos are moving images, and analyzing them manually, particularly in large quantities, will be time-consuming (Khan & Malik, 2022). Basically, this form of broadcast display debates or talks about the meaning of a hadith in the form of narration for the purpose of understanding the audience. While the broadcast of the content is not limited to the age of the audience because it is general in nature.

Deviation of interpretation or meaning of a hadith means using a hadith in the form of interpretation, explanation, or understanding with the wrong method. It applies to the original hadith with or without references. Most of the content is according to the title and theme, as well as the argument interspersed with the delivery of hadith in translation and interpretation without stating the reference or, changing terms, or reducing the meaning, or increasing the meaning of the hadith according to the suitability of the content.

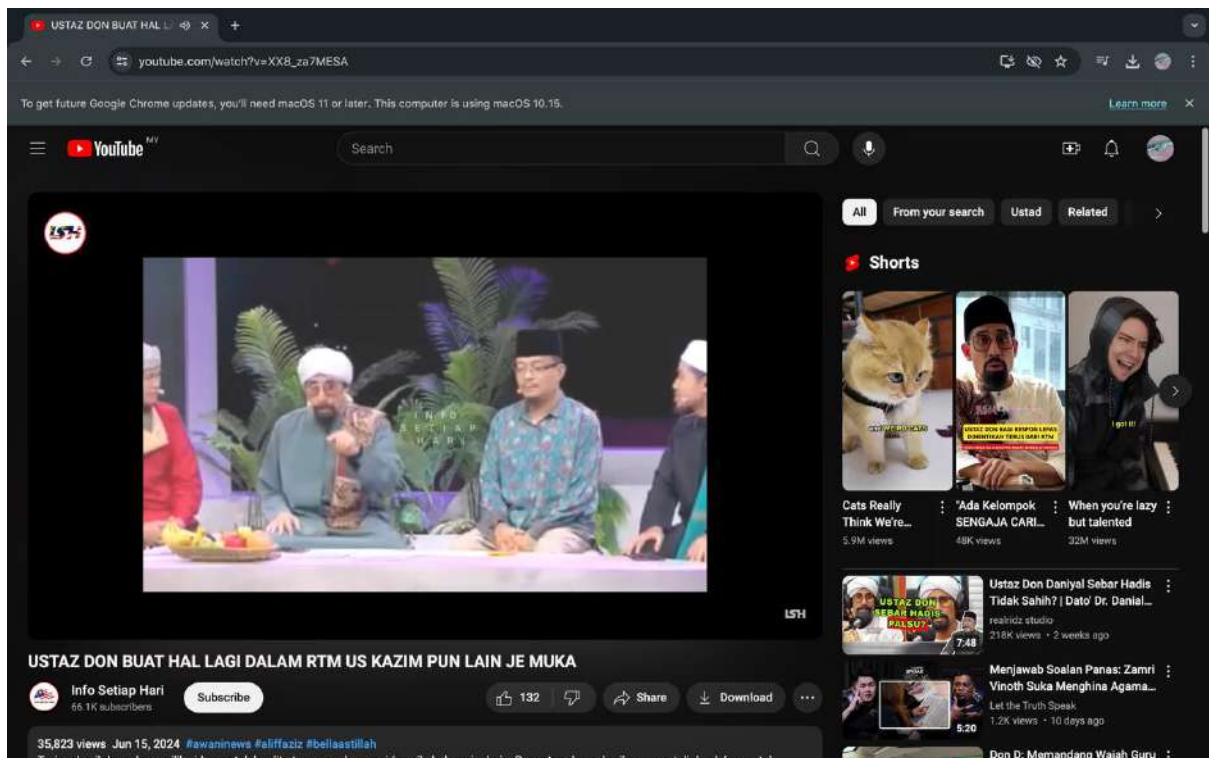
FORMS OF DISTORTION OF HADITH'S INTERPRETATION/MEANING IN YOUTUBE

The researcher focused on choosing data that represents issues related to the title even though there are other options in the form of hadith misuse on YouTube. Based on previous research and findings, the researcher identified that the form of distortion of interpretation or meaning of hadith can be categorized into 5 forms. The following are the forms of distortion of interpretation or the meaning of hadith broadcasted through social media, YouTube:

1. Broadcasting Coverage / Replays of Religious Talks

Users (Content Creator) upload recordings or share (replay) videos covering religious talks. Irregularity occurs when a speaker delivers his own interpretation without referring to any book of authoritative scholars to support the content of his talk with hadith. According to Nik Suhaili et. al. (2022), the spread of false hadith nowadays in the new media era often occurred in social media as well as in Islamic talks.

Example 1:



Screenshot 1: https://www.youtube.com/watch?v=XX8_za7MESA

He stated at 0:56:

Memandang kepada wajah guru lebih baik daripada mendedekahkan 1000 ekor kuda di jalan Allah. Kalau melihat wajah guru sahaja begitu, kalau mengiring guru macam mana?

Meaning:

Looking at the teacher's face is better than giving 1000 horses in charity in the way of God. If you see the teacher's face alone, it's like that, if you accompany the teacher, what's it like?

He added at 1:16:

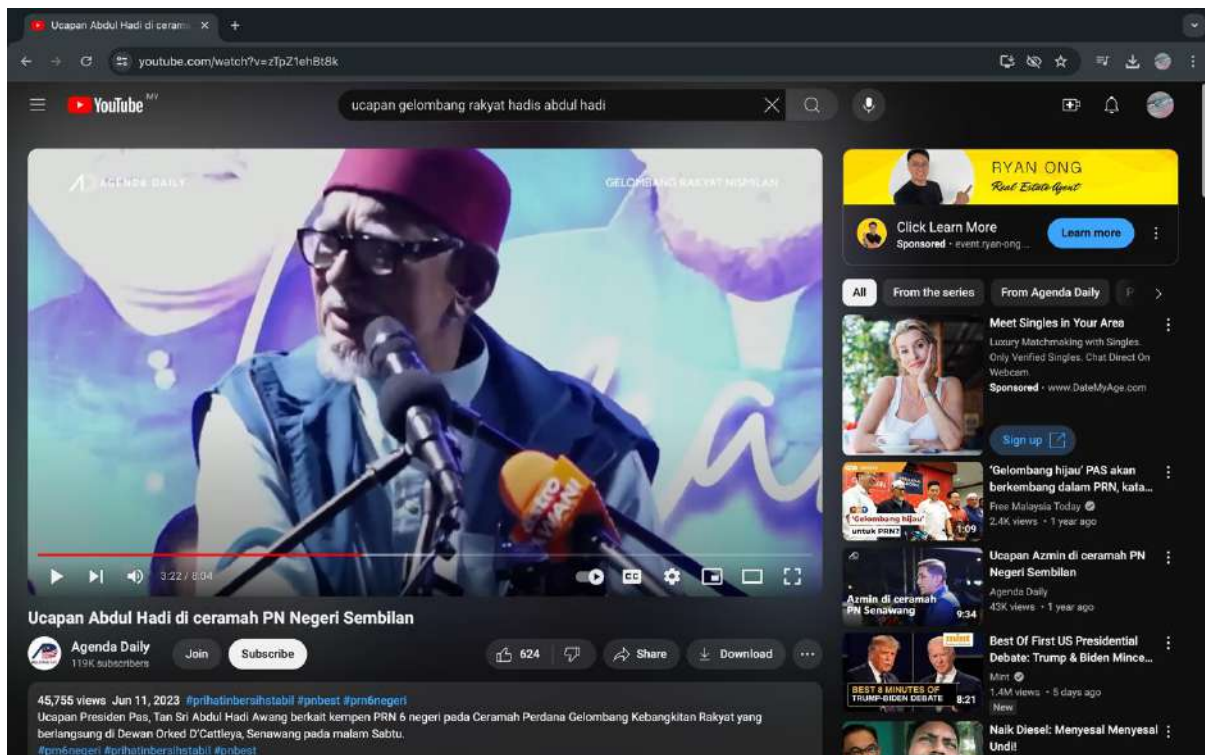
"Mengiringi guru adalah lebih baik daripada amalan lain."

Meaning:

“Accompanying a teacher is better than other practices.”

Based on the display of this video, it is clearly stated that the speaker is trying to quote a hadith in understanding to relate to the title of the talk. According to Prof Dato Arif Perkasa Dr Mohd Asri Bin Zainul Abidin (2020), he stated that “Among those mentioned by Ibn Qayyim; Among the characteristics of the false hadith is the element of mujazafah, which is exaggeration in determining rewards and sins. Small things are given too big punishments, or too big rewards that are unreasonable.”. According to Nik Suhaili et. al. (2022), Muslims who have a weakness in Islamic knowledge easily believe and accept those of false and fake hadith. They added It becomes more complicated when these hadiths become commonly used among of the community and are always being quoted in TV, radio and other social medias.

Example 2:



Screenshot 2: <https://www.youtube.com/watch?v=zTpZ1ehBt8k>

Based on the video, the speaker stated about hadith at minute 6:12:

“Pemimpin yang dipilih di kalangan mereka yang penyangak, banduan, perasuah, penjenayah, penipu, jadi pemimpin. Allah taala jadikan orang-orang jahat memimpin kamu. Ini amaran nabi.kalau kamu tak suruh perkara baik untuk mencegah kemungkarannya, Tuhan jadikan orang yang jahat memimpin kamu. Turun azab ke atas kamu. Azab kenaikan harga barang, jatuh nilai mata wang, macam-macam. Kemelesetan ekonomi, ini bala bencana!

Azab! Orang yang baik berdoa, Tuhan tak terima doa dia. Panggillah Syeikh Yaman yang mana pun doa, Tuhan tak terima kerana kamu tinggalkan kewajipan amar makruf dan nahi mungkar. Mengundi adalah cegah kemungkaran, suruh yang baik. Kewajipan besar dalam Islam. Pilih parti yang nak bawak perubahan kepada yang baik. Nak lakukan islah, perubahan selamatkan negara ialah Perikatan Nasional!!"."

Meaning:

"Leaders chosen from among those who are rogues, prisoners, corruptors, criminals, liars, become leaders. Allah Taala make bad people lead you. This is the prophet's warning. If you do not order good things to prevent evil, God will make evil people lead you. Doom descend upon you. The punishment of rising prices of goods, falling currency values, all kinds of things. Economic recession, this is a disaster! Doom! A good person prays, God does not accept his prayer. Call the Sheikh of Yemen, no matter what you pray for, God will not accept it because you have abandoned the duty of *amar makruf* and *nahi munkar*. Voting is preventing evil, enjoining good. A great duty in Islam. Choose the party that wants to bring change for the better. Want to make amends, change to save the country is *Perikatan Nasional!!*".

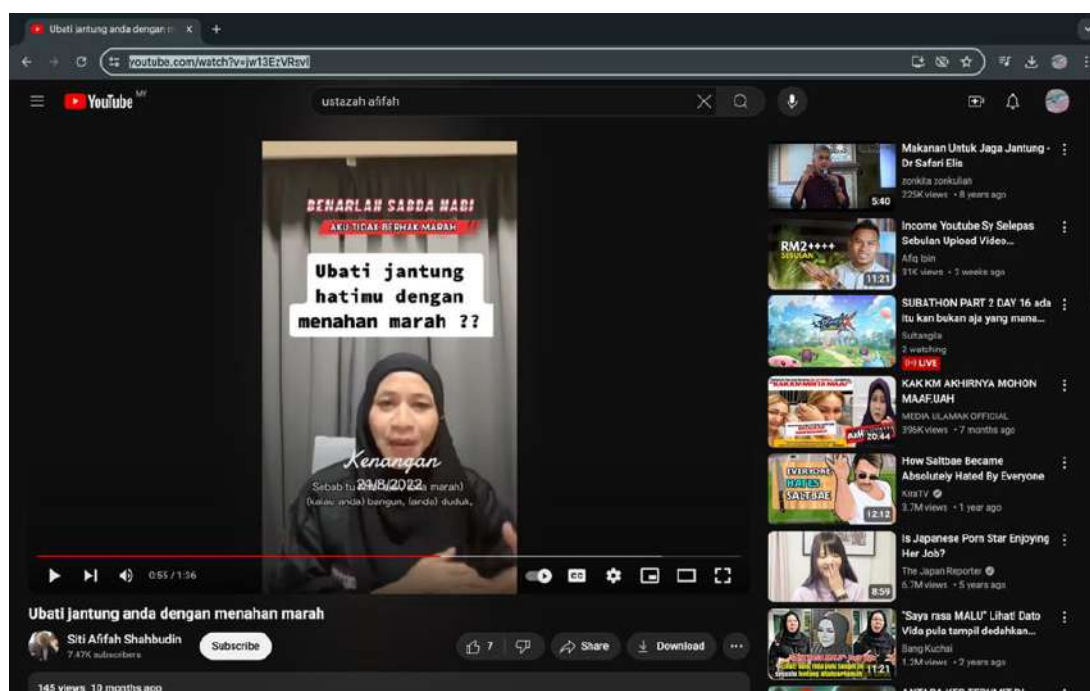
In the context of the verse, the speaker described his statement in the sense of understanding as a hadith of the prophet. The speaker tried to convey the message that the connection of the hadith of the prophet with political issues. The understanding of hadith in his statement is not with the original Hadith, and without any hadith reference, or Sanad of narration. Nik Suhaili et. al. (2022) stated that some hadiths are presented briefly without the beginning of the 'sanad' or the complete 'matan'.

The effect is very dangerous on the understanding of his followers or members of his party group. It even confuses the public in determining the truth. Actions like this are more of a personal interest so that they are called by a few people as religious riders. Political leaders should always look at the interests of the people, race, and religion as the focus in politics and not just pursue the interests of positions and ranks (Nik Suhaili et. al., 2022).

2. Current Issue Post (With Hadith)

Users (Content Creators) record their own videos (influencers) to deliver messages related to their views on an issue, then support their statements based on hadiths. Distortion occurs when the influencer explains the translation based on his own interpretation according to personal understanding.

Example 1:



Screenshot 3: <https://www.youtube.com/watch?v=jw13EzVRsvI>

Based on the video, the speaker mentioned at minute 0:55:

"Sebab tu nabi ajar, bangun, duduk. Duduk, baring. Sebenarnya itu perubatan. Ketika kita sedang marah, bahawa kita sedang memudaratkan diri kita semua dengan menyebabkan tubuh badan kita jadi memanas dan juga menyebab... mengeringkan tubuh badan kita. Apabila kita cuba menahan marah, badan kita akan menggigil, kepala kita akan sakit, secara automatik sebenarnya ia sedang merawat jantung kita. merawat jantung kita menjadi stabil balik. Kalau manusia, yang dia sendiri akan berkata "Aku tidak berhak marah kerana aku adalah makhluk Allah"."

Meaning:

"That's why the Prophet taught, get up, sit down. Sit, lie down. It's actually medicine. When we are angry, that we are harming ourselves all by causing our body to heat up and also cause... to dry our body. When we try to hold back our anger, our body will tremble, our head will hurt, automatically it is actually treating our heart. treating our heart to become stable again. If it's a human, he himself will say "I have no right to be angry because I am a creature of God.""

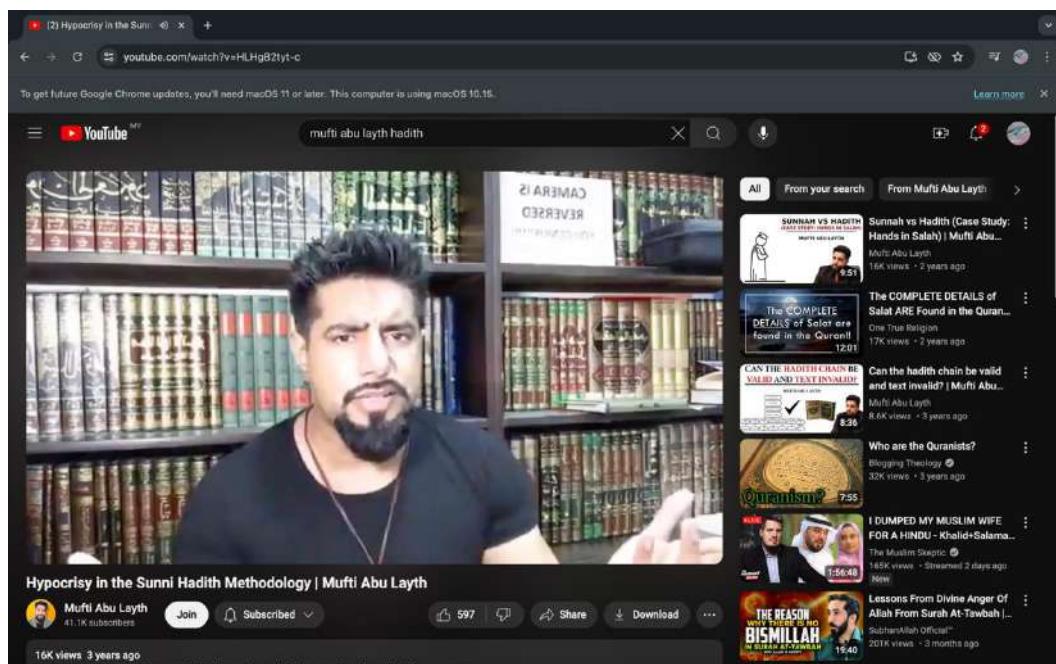
Influencers convey their own understanding of the teachings of the Prophet PBUH regarding sunnah practices. However, she did not state the original hadith or reference. In the tone of a casual conversation, it has become commonplace to talk about the sunnah and practices of the prophet among today's society. However, it is more perfect if civilized with knowledge such as stating the hadith reference or its

interpretation. The consequences of carelessly delivering teachings will cause the audience to get used to narration without reference. In other words, defiling the sanctity of the hadith.

According to Farah Hanie et. al. (2023), to master the discipline of *Ulum Hadith*, one must be persistent in their quest for knowledge in order to solve the challenge of interpreting hadith because of the numerous debates in *Ulum Hadis* that serve as instruments for comprehending hadith in a thorough context and it is crucial to comprehending the hadith both historically and linguistically. Consequently, it is a strategy to make sure that the use of hadith quotations is comprehended correctly. Three essential elements are language, text, and history for developing an interpretation. Texts from the past are interpreted using these three elements, and they are further comprehended in light of the present (Farah Hanie et. al., 2023). The group of Islamic preachers who are shallow in knowledge, ignorant, and have no basis in religious knowledge has argued with hadiths without observing the status of the hadiths and preachers should refer to study in detail on hadith from 'Kitab muktabar' such as 'kutub sittah' (Nik Suhaili et. al., 2022).

3. Hadith Criticism and Debates

Users (Content Creator) record their own videos (influencers) to deliver messages related to the interpretation of a hadith. Through the narration based on his understanding, to some extent the hadith is unraveled according to patterns and conflicting understandings. Distortion occurs when the speaker argues by himself according to his personal understanding and opinion without thinking about the level of thought or the language used.



Screenshot 4: <https://www.youtube.com/watch?v=HLHgB2tyt-c>

Example 1:

Based on the video, he mentioned in minute 1:21:

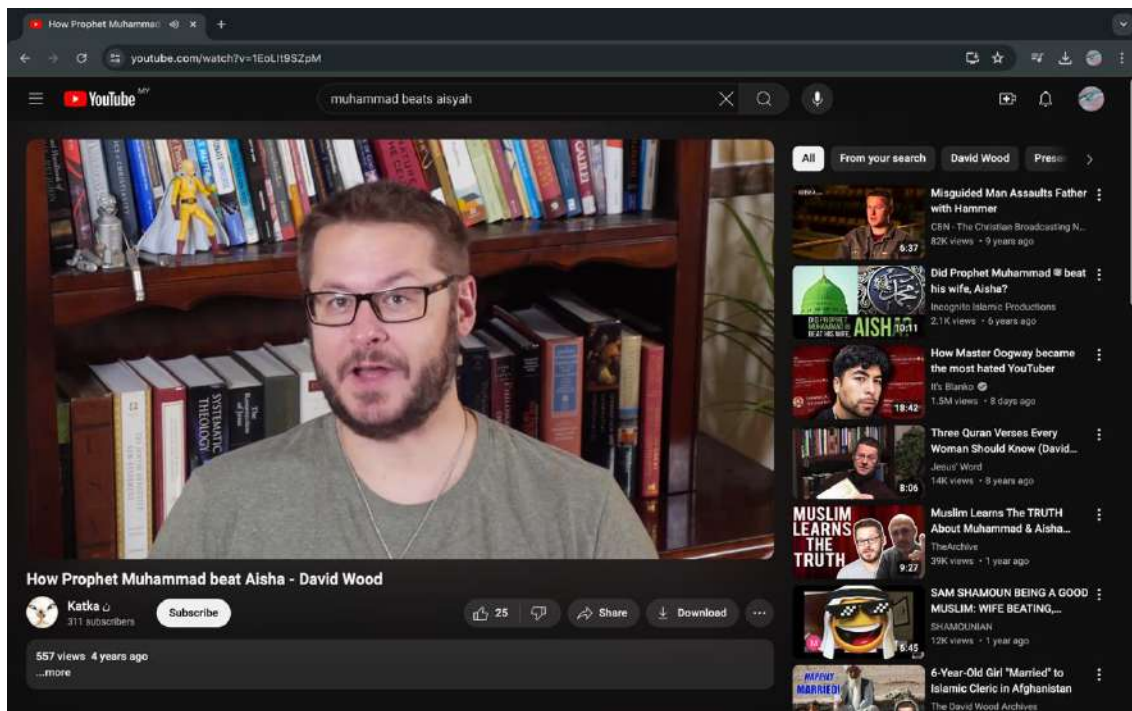
“Let's be honest, if we had somebody praising al-majusi for killing, let's say there's a narrator in the Tabari who writes poems praising the murderer of Umar. Would we accept him? So, why do we accept the one who's praising the person who murdered ali? This is just ridiculous like we are just so drowned in prejudice and bias. The point is that anybody, these were all great companions that you know said ali, said omar. I believe these were all great companions of the prophet. They were all very close to prophet. Saidina ali was murdered by namul jim, some guy openly praises him and he remains praising him till his deathbed. In fact, ibn hajjah writes in Fathul Bari, some people said he did tawbah. This guy he says no. He didn't. Yet bukhari accepts him, so we accept him? . You know the hypocrisy that we have and this is why it infuriates a lot of the shia people. But, can you blame them? Because here's a guy who's killed Saidina ali and he is somebody who's follows that person and praises him all the time. Writes poetry not only praising him but praising that he killed ali and then suddenly say yeah this guy is fine we can take from him, but we can't take from imam Jaffar or any of the shia imams.”

This statement grinds a rather critical argument and is only suitable for its members, but less suitable for the general public. Scientific discussions similar to this video requires explanations from experts to ensure an aligned understanding and not distort or burden the audience.

4. Distortion in Hadith Explanation

Users (Content Creator) record their own videos (influencers) to deliver messages related to their views on a hadith for the purpose of distorting understanding. Among the reasons of spreading false knowledge about Hadith is due to the lack of Islamic knowledge, fanatics of certain beliefs, and related to political interest (Nik Suhaili et. al., 2022). This form of broadcasting is easier to identify for its missionary purpose by the audience from the hadith experts, but it is very dangerous for the general public, because there are aspects of this group's faulty interpretation that contradict the rules and ethics of Islamic teachings, it has the potential to drive someone into apostasy (Farah Hanie et. al., 2023). Being obsessed or fanatic towards certain individuals in terms of their character or delivery can deceive people who lack in knowledge (Nik Suhaili et. al., 2022).

Example 1:



Screenshot 5: <https://www.youtube.com/watch?v=1EoLIt9SZpM>

Based on the video, the speaker read a hadith and explain in 2:18:

“He (Prophet Muhammad PBUH) struck me (Saidatina Aisyah RA) on the chest which caused me pain. And then said did you think that Allah and his apostle would deal unjustly with you? He struck me on the chest which caused me pain. ... that's right don't let her give you no lip Prophet Muhammad. What's amazing here is that Muslims lose their minds when you quote this passage to them. It doesn't mean that he hit her it only means that he gave her a shove or that he poked her or that he pushed the evil out of her with his holy ... but why in the name of common sense would Muslims think that beating women and child brides is bad when Allah tells you to beat rebellious wives into submission in Sura 4 verse 34 of the Quran. Fact Muhammad and his companions were wife beaters. If you think that wife beating is morally wrong, congratulations, you're a better person than Muhammad and his companions.”

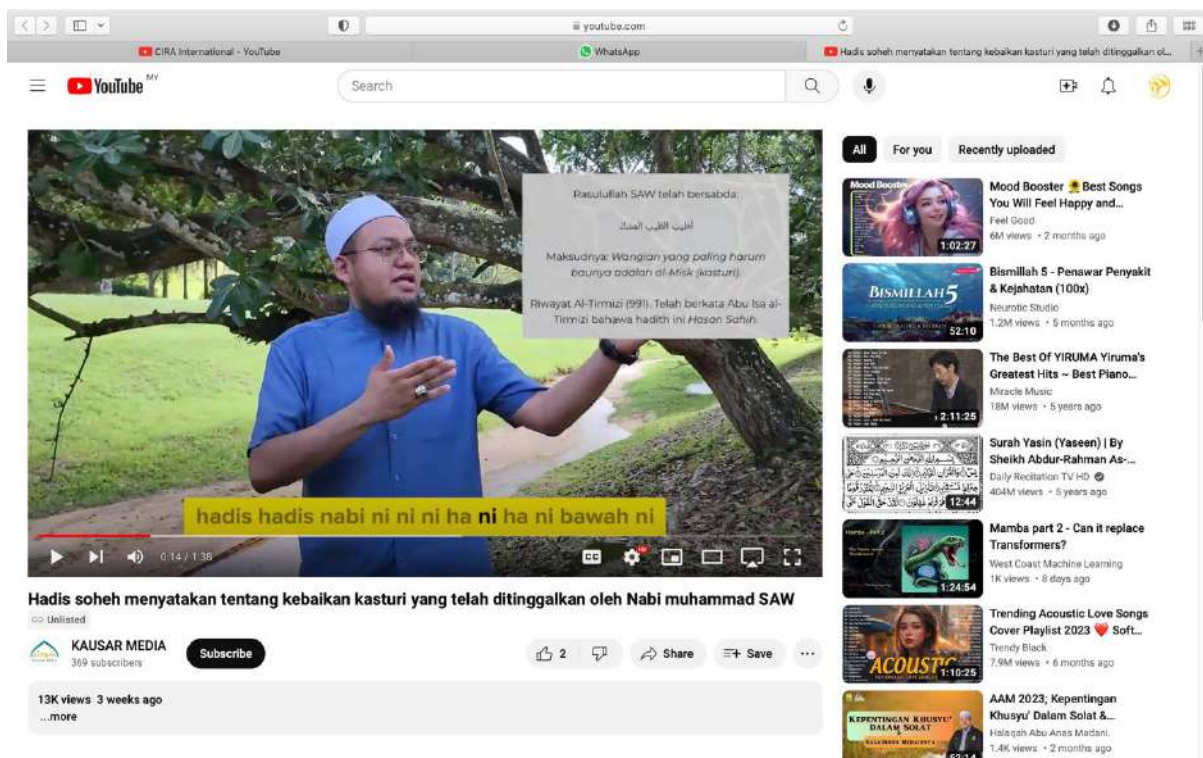
Based on the statements, the Influencer openly challenged the rationale and truth of the hadith. Distortion occurs when the influencer explains the translation based on his own interpretation according to his personal understanding without reference to the interpretation. The existence of forces that attempt to pervert Muslims' religion has always been a problem for Islam's progress as it follows the modern trend. In open or private discourse, this group is becoming more and more active in refuting, rejecting, and even disparaging Islam. The existence of forces that

attempt to pervert Muslims' religion has always been a problem for Islam's progress as it follows the modern trend. In open or private discourse, this group is becoming more and more active in refuting, rejecting, and even disparaging Islam (Farah Hanie et. al., 2023).

5. Product Advertising by Using Hadith

From the point of view of advertising, there are also deviations in the interpretation of understanding. According to M. Zarihi Nubhan (2024), the use of al-Quran and Hadith on YouTube advertising can be divided into two forms. First, business advertising such as services, product sales, food and supplements by traders. Second, advertising applications for charitable assistance, donations, *wakaf* and sponsorships by associations or charitable organizations.

Example 1:



Screenshot 6: Advertisement in YouTube

As “Tibbun Nabawi” which is prophetic medicine are combined with other hadiths. For example, the prophet's sunnah food is combined with milk, dates, and honey in one product. This kind of thing turns out that the broadcaster takes the interpretation of the hadiths in the context of the summary regardless of the disciplines and manners of the hadith scholars. According to Farah Hanie et. al. (2023), the contextual approach regarding hadith knowledge includes three main elements, which are: (1) History, by emphasizing the question of why the Prophet

Muhammad SAW said that and how the socio-cultural history of society and politics was at that time), (2) Sociology, by highlighting from the point of view of the human position that leads to such behaviour) and (3) Anthropology, which is the scientific study of human origins; physical and cultural development, racial characteristics and religious customs and beliefs).

Overall, the study found that distortion of interpretation or distortion of the meaning of hadith is one of the forms in misuse of hadith issue. In addition, it also has a negative impact by confusing YouTube viewers' in understanding hadith.

METHODOLOGY

This qualitative research aims to delve into the phenomenon of misrepresentation of Hadith interpretation in content broadcasted on social media platforms, with a specific focus on YouTube. Hadith, the recorded sayings and actions of Prophet Muhammad (peace be upon him), hold significant religious and cultural importance for Muslims worldwide. In recent years, the proliferation of social media has facilitated widespread dissemination of religious content, including interpretations of Hadith, which can influence public perception and understanding. This study carry out library research in the form of content analysis of the relevant literature that includes journals, newspapers and conference paper between 2022 and 2024 to collect relevant information and data.

This study also adopts a thematic and content analysis approach to systematically examine how Hadith interpretations are presented, discussed, and potentially distorted in YouTube videos. The research will involve selecting a diverse sample of YouTube videos that discuss or interpret Hadith, utilizing keywords and criteria to ensure representation across different perspectives and content types. The materials are not only limited to English language but also covers Malay language materials. YouTube videos are analysed also by using content analysis, downloaded as evidence (in case of the uploader decides to delete the video in the future) and screenshots are taken to provide an early identification to the the topic under discussion. The materials also include online materials gathered from YouTube application as field observation data as examples.

Key objectives include identifying prevalent themes and narratives surrounding Hadith interpretations on YouTube, exploring the methodologies and sources used by content creators, and critically assessing instances of misinterpretation, selective quoting, or contextual manipulation that may distort the original meanings of Hadith. Through detailed qualitative analysis, the study aims to uncover patterns of representation and analyze the implications for religious discourse, community cohesion, and individual understanding among viewers.

Moreover, this research contributes to a brief discussions on the impact of digital media on religious education and understanding, highlighting challenges related to authenticity, accuracy, and trustworthiness of information in online religious content. By shedding light on how Hadith interpretations are communicated and received on social media, the study aims to provide insights that can inform strategies for promoting responsible dissemination of religious knowledge and fostering informed public discourse.

In conclusion, this study seeks to deepen understanding of the dynamics of religious content dissemination on social media platforms like YouTube, with a specific focus on the nuances and complexities surrounding Hadith interpretation. By examining the intersection of digital media and religious discourse, the research aims to contribute to scholarly discussions on media ethics, religious literacy, and the role of online platforms in shaping contemporary religious understanding.

RESULTS AND DISCUSSION

The unveiling of one of the issues of misuse of hadith, which is the distortion of the meaning of hadith in the broadcast content on YouTube, illustrates the state of society that is increasingly exposed to various skeptics and ideologies that can distort a person's stance on hadith. If this issue is not curbed, it will undoubtedly invite more great slander against hadith knowledge and Muslims. The interpretation of the hadith that deviates from the true meaning leads to confusion, anger and chaos between the community. Therefore, this issue needs to be taken seriously by all levels of society in order not to leave an impact that can damage the practice and even worse, the faith of Muslims. Without true faith, a person will be a victim of suspicion that hinders a true view of the true Islamic way of life.

The researcher found that the video data obtained through a search method on the YouTube social media site contained a variety of hadith broadcasting issues. The results of the data are then examined and analyzed. The content is taken by broadcasters in the country and also from abroad. The average broadcast of this content receives more than 10,000 views. It means these videos are popular. The result of the observation, the researcher found that among the forms of the problem elements are:

- i. Stating false hadith.
- ii. Using hadith for personal gain.
- iii. The broadcast content ignores or does not specify the hadith reference presented.
- iv. Using personal understanding in commenting on a hadith without reference to tafsir.
- v. The broadcaster is not sensitive to the scholars of hadith.
- vi. Unsuitable critical critics/debates for public viewing.

The researcher conducts research and analysis through specific methods on statements from an audio, textual, and visual point of view to identify problem patterns in the data content. The researcher also quotes audio statements and repeats them in textual form. The researcher identified that the content was broadcast in 3 forms of broadcasting, namely:

- i. Replay broadcast (full/video clip)
- ii. Broadcast self-recorded content
- iii. Advertiser broadcast

Then the researcher organizes and presents the data according to different issue categories and comments based on previous studies as support. As a result, the researcher was able to identify the forms of broadcasting the misuse of hadith on YouTube. The following are the forms:

- i. Broadcasting Coverage / Replays of Religious Talks
- ii. Current Issue Post (With Hadith)
- iii. Hadith Criticism and Debates
- iv. Distortion in Hadith Explanation
- v. Product Advertising by Using Hadith

Researchers can also identify the purpose of using hadith from the point of view of broadcasting on YouTube. Generally the use of hadith in the form of broadcasting on YouTube is to get public attention and viewing. While the specific purpose is different and not the same, it depends on the individual broadcaster. The following is a form of purpose specifically for the use of hadith in broadcasts on YouTube.

- i. Religion (preaching/missionary)
- ii. Advertising
- iii. Debate
- iv. Gain popularity
- v. Profit money
- vi. Sharing

Especially for Muslims that the use of the words of the prophet or sunnah is important because it is a hadith as the main source of reference. It not only gets the attention of Muslims but they are sensitive and sensitive. The reception of watching the use of hadith on YouTube received a high response and the broadcasting about it is increasing.

Researchers agree that the use of hadith on YouTube can provide many benefits to the increase of knowledge for users. Researchers believe that the uncontrolled use of hadith in YouTube can result in the distortion and misuse of hadith and it can have many negative effects on public users and even affect the

sanctity of hadith. Among the adverse effects that could happen to public users for misusing hadith in broadcasting on YouTube:

- i. Disputes and divisions of the people.
- ii. Thinking astray.
- iii. Become a religious rider.
- iv. Confused with religion (heresy).
- v. Negligence in dissemination (sharing).

Although the government, especially in Malaysia, has made guidelines for the use of social media regarding the use of religious sources, the misuse of hadith still occurs and is widespread because content from foreign countries through extensive networks without borders cannot be blocked.

Based on the findings of this study, the researcher found that this issue needs to be taken seriously and requires action or effort towards dealing with it. Among the researcher's recommendations are:

- i. The government needs to give a mandate to the enforcers on the misbehavior of the use of hadith in the country.
- ii. "Care about Ulumul Hadith" campaign on broadcasters and social media users.
- iii. The application of Ulumul Hadith education in stages starting from primary/primary education.
- iv. Development of academic programs or modules.
- v. Advanced application development of hadith filters.

The interpretation of the hadith that deviates from the true meaning leads to confusion, anger and chaos between the community. Therefore, this issue needs to be taken seriously by all levels of society in order not to leave an impact that can damage the practice and even worse, the faith of Muslims. Without true faith, a person will be a victim of suspicion that hinders a true view of the true Islamic way of life.

CONCLUSION

Freedom of speech has been misunderstood by a few members of the public who use social media to spread hadith recklessly and misused until many issues arise that threaten other social media users. The main references of Muslims, which are Al-Quran and Hadith, are also not free from the trap of negative elements on social media. This kind of negative publicity can not only threaten some parties, but it can also undermine the stability of the country by dividing the harmony of life in a multi-racial and multi-religious society. YouTube videos that contain dangerous elements are often linked to political, racial, religious issues, either for propaganda

purposes or unintentionally. This medium should make it easier for scholars to spread da'wah, however it has become a battlefield of content that needs to be watched and monitored by the authorities. These days, a lot of things happen that contradict faith due to the dissemination of ideas through many forces both inside and outside of society, which might end in apostasy and polytheism. Without control or efforts to curb the problems of interpretation based on lust and reason, confusion and chaos characterise both this world and the hereafter (Farah Hanie et. al., 2023).

Various parties have mobilized energy from various angles of expertise to support the government in providing guidelines for the use of current technology such as Content Code from the Malaysian Communication and Multimedia Commission (MCMC) or *Garis Panduan Penulisan Hadis dan Penerbitan Teks Hadith* provided by Ministry of Home Affairs (MOHE/KDN). It is one of the efforts to eradicate and curb the symptoms of unhealthy broadcasts such as slanderous content, fake news, defamation, accusations, criticism and various other negative elements. However, this writing is not definitive, and it supports previous studies and also hopes to be a reference for future studies. The researcher hopes that this issue will receive the attention of academics and also the authorities in order to continue efforts to maintain public harmony and the purity of hadith.

REFERENCE

Nik Suhaili binti Nik Fauzi, Mesbahul Hoque, Kauthar Abd Kadir. (2022). Spreading Hadith Maudhu' via Information and Communication Technology: Reasons and Suggestions. *Journal of Hadith Studies*, 7, 2550-1488 Penerbit Universiti Sains Islam Malaysia.

Farah Hanie, Mohd Haidhar & Mazlan. (2023). Penyalahgunaan Al-quran dan Hadis oleh Golongan Agnostik dalam Persoalan Aqidah. *Jurnal Usuluddin*, 51 (1), 29-54. Universiti Kebangsaan Malaysia.

Muhammad Zarihi Nubhan bin Abdul Rahman. 2024. *Usage of al-Quran and Hadith in YouTube Advertisement from Islamic Perspective* [Master's Thesis, Universiti Sains Islam Malaysia]. USIM Research Repository.

Info Setiap Hari (2024 Julai 4). *USTAZ DON BUAT HAL LAGI DALAM RTM US KAZIM PUN LAIN JE MUKA*.

https://www.youtube.com/watch?v=XX8_za7MESA

- Agenda Daily (2024 July 4). *Ucapan Abdul Hadi di ceramah PN Negeri Sembilan*.
<https://www.youtube.com/watch?v=zTpZ1ehBt8k>
- Siti Afifah Shahbudin (2024 July 4). *Ubati jantung anda dengan menahan marah*.
<https://www.youtube.com/watch?v=jw13EzVRsvI>
- Mufti Abu Layth (2024 July 6). *Hypocrisy in the Sunni Hadith Methodology*.
<https://www.youtube.com/watch?v=HLHgB2tyt-c>
- Katka ۞ (2024 July 4). *How Prophet Muhammad beat Aisha – David Wood*.
<https://www.youtube.com/watch?v=1EoLI9SZpM>
- Prof Madya Dato Dr Mohd Asri Zainul Abidin (2020 Mac 30). *Kenali Hadis Palsu Menerusi Matan*.
<https://muftiperlis.gov.my/index.php/minda-mufti/287-kenali-hadis-palsu-menerusi-matan>
- Khan, M. Laeeq & Malik, Aqdas. (2022). *Research YouTube: Methods, Tools, Analytics*. n.a.

IMPLEMENTATION AND IMPACT OF SOCIO-ECONOMIC PROGRAMS: A CASE STUDY AMONG STUDENTS AT THE FACULTY OF ECONOMICS AND MUAMALAT, UNIVERSITI SAINS ISLAM MALAYSIA (USIM)

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Abstract

The socio-economic well-being of students is the basis for improving academic quality and sustainability, especially involving material needs such as finance and facilities. Various initiatives and programs are implemented in stages and continuously to ensure the continuity of human capital development, especially involving less fortunate students. Therefore, a study involving the implementation and the extent to which the programs implemented are worth highlighting to ensure the well-being of the students involved. A survey method was used to collect data from 149 students at the Faculty of Economics and Muamalat (FEM), USIM, and the Statistical Package for the Social Sciences (SPSS) was used in data analysis. The two main objectives of this study are to discuss the socio-economic programs implemented and to evaluate the impact of the implementation of the programs involving B40 students who are less fortunate. The study results show that there are two main programs that have been successfully implemented, namely Gerobok Rezeki and Bilik Komputer Infaq Al-Kauthar. In addition, the implementation of these programs has been able to improve academic performance, student well-being, and research. Efforts that have been implemented are in line with the government's policy to develop the B40 and less fortunate groups, focusing on various aspects such as physical, economic, and human capital. Assistance through various programs at the faculty level can have a significant impact on the quality of life in terms of student education.

Keywords: B40, socio-economic programs, Gerobok Rezeki, Bilik Komputer Infaq Al-Kauthar, SPSS.

BACKGROUND, INSPIRATION, AND BEGINNING

Financial constraints driven by student poverty issues are a subjective issue involving multiple dimensions due to various factors that will drive activities and initiatives to address them. Undeniably, the factor of poverty involving lack of material ability is identified as one of the causes of dropout problems among

students. In an effort to create a knowledgeable and educated society, research that explores the relationship between poverty and education is important to identify appropriate programs to ensure that there is no problem of student dropout in education. The Ministry of Education of Malaysia aims to ensure education for all regardless of diverse backgrounds to bridge the educational gap among the people of this country (Othman et al., 2021). The main goal of education at the Faculty of Economics and Muamalat, USIM is to uphold knowledge and produce knowledgeable individuals contributing to society, the country, and the world. However, problems in the educational aspect, especially involving socio-economic aspects, often occur at the level of higher education and are identified as one of the causes (Othman et al., 2021).

In Malaysia, early studies to measure the poverty rate of Malays in the 1950s and 1960s were conducted by Professor Diraja Ungku Aziz (Johan, 2020) using the sarong index. However, the use of the sarong index is impractical and irrelevant for use today in measuring the level of individual poverty (Mohamed et al., 2011). Every year, research involving poverty becomes a focus to see the factors, effects, impacts, and ways to address it to the sustainability of community life, including students (Abdul aziz et al., 2020; Afzan & Abd, 2021; Marquez et al., 2020). Furthermore, when the Covid-19 pandemic hit the world at the end of 2019, it triggered various constraints and new phenomena that escalated the dependence and needs of the community on various aspects of assistance to continue to rise from the pandemic crisis (Marquez et al., 2020).

The main purpose of this study is to discuss and identify the programs implemented to assist less fortunate students. Furthermore, to see the extent to which the implementation of these programs can help the group of students involved in academic performance, student well-being, and research. The structure of this article discusses four main aspects, namely literature review, research methodology, findings, and discussion and conclusion.

It is generally aware that students are among the groups affected and in need of attention from various parties. The involvement of all parties, especially the management, in addressing the socio-economic problems of these students will ensure that the problems faced by students can be addressed holistically. Each individual needs to be seen as a valuable resource and should not be marginalized from continuing to contribute to socio-economic development as a whole. After realizing the constraints faced by students, in 2023, the FEM has taken various initiatives to provide financial assistance and infaq programs to alleviate the burden and meet the needs of students facing material, facility, and financial constraints.

The difficulties and burdens faced by students have been identified as contributing factors that affect their ability to continue their daily lives, but also affect the quality and academic performance. Among the initiatives and programs planned at the faculty level, the focus is on basic assistance such as food, access to technology, and learning resources such as equipment. There are two socio-economic programs that have been launched at the faculty level, namely Gerobok Rezeki and Bilik Komputer Infaq Al-Kauthar.

LITERATURE REVIEW

FACTORS OF POVERTY AMONG STUDENTS

Issues involving economic constraints and poverty are often discussed because they involve broad and subjective issues. There are various factors that have contributed to this issue, such as politics, economics, social, culture, and disasters such as Covid-19. In this regard, the measurement and definition of economic constraints due to poverty need to be interpreted and measured from various perspectives and not only focused on income factors alone, but also delving into the reality of poverty faced by each individual from various dimensions and indicators such as health, education and standard of living (UNESCO, 2016). According to Rowntree (1901), poverty refers to the uncertainty in terms of individual or household income to meet daily basic needs such as food, shelter, and clothing. As a result of the lack in providing basic necessities, someone is unable to engage in various daily activities such as education, employment, and so on (Townsend, 1979). In the context of this study, the issue involving constraints among students in higher education institutions has been a global concern in recent decades. Students face financial problems, for example, facing various challenges in an effort to continue their studies due to being unable to afford tuition fees, accommodation, and basic necessities such as food. This situation is believed to affect their academic performance, physical health, and mental well-being, thus impacting their future (Abdul Aziz et al., 2020).

As a result, recent studies have examined the factors contributing to student poverty and its consequences (Abdul Aziz et al., 2020). One of the main factors is the increasing cost of higher education every year, becoming a burden to parents due to the increase in family income, and this situation causes students to require assistance in terms of educational funds. This situation makes students have to tighten their belts to pay for college accommodation and daily expenses, with some having to drop out of continuing their studies. In addition, digital poverty also haunts students due to their inability to provide ICT-based goods and

services. The need for ICT has become the basis for student needs, especially when the implementation of Teaching and Learning (PdP) has shifted to an online mode. The failure of students to provide this digital facility makes them among the digitally poor, covering Internet access, knowledge, physical, economic and social. The threat of digital poverty has exposed the reality of social equality, affecting students' learning performance (Afzan et al., 2021). In addition, students from less fortunate backgrounds also face various other challenges such as limited access to campus resources, building peer support networks in an effort to build a sense of community. However, students struggling with financial issues are the main challenge to succeed in academics and control psychological well-being.

IMPLEMENTATION OF SOCIO-ECONOMIC INITIATIVE PROGRAMS

According to Amran (2021), excellent and motivated students tend to obtain good learning outcomes to stimulate the spirit to learn. Moral support among those around is very much needed to ensure that students continue to be enthusiastic to continue their studies regardless of the circumstances. The factors of financial constraints and digital poverty faced by students in today's era of globalization deserve attention. In the issue of poverty and financial constraints, the B40 and M20 groups are among those affected because the economic standard today is very high, not to mention the impact of the pandemic that has caused some of the people in this income range to be trapped (Nur Syawal & Nurfatiha, 2022). Therefore, some families are affected and unable to provide the best needs to their children, including spending sources, gadgets and learning facilities needed. The hardship of life experienced by the community in these two categories must certainly face financial problems and in turn affect the needs of students to learn due to parents who do not have stable financial economics to assist them (Marquez, 2020). Therefore, at the FEM faculty level, there are two socio-economic initiative programs that have been implemented to address the socio-economic problems plaguing students, namely Gerobok Rezeki and Bilik Komputer Infaq Al-Kauthar.

CONCEPT AND IMPLEMENTATION OF THE GEROBOK REZEKI PROGRAM

This infaq-based program was launched on October 24, 2023, with the aim of providing cooked food and dry food to students. The target group for this program is students with financial constraints. The main objective of this program is to ensure that students get basic necessities such as food and avoid them from

going hungry. The concept of food infaq for this program involves contributions from various parties at the faculty level and the public who intend to give to charity. This program has received positive response among staff and the public as contributors and student groups as recipients. This program indirectly creates a culture of charity and mutual help between one another and indirectly reduces the burden of less fortunate students to obtain food sources before starting each day's learning session. The main goal is to ensure that no students have to tighten their belts and face the problem of hunger, then lose focus on the ongoing learning sessions. The implementation of this program is in line with efforts to address factors that influence student academic success involving socio-economics, infrastructure and the necessary needs in the context of education (Briones et al.,2022). Understanding the factors that influence, and support student academic success is important to foster inclusive and sustainable educational development (Dhakal, 2020).

CONCEPT AND IMPLEMENTATION OF THE BILIK KOMPUTER INFAQ AL-KAUTHAR PROGRAM

A conducive learning environment is a key factor for students to undergo learning sessions comfortably. The environmental mode can influence a person's behavior and emotions to learn. In ensuring comfortable facilities and learning spaces, the role and support of various parties are important in an effort to plan and provide a comfortable learning space that suits the environment (Nur Syawal & Nurfatiha, 2022). Many university-level students do not have personal computers or adequate facilities to complete academic assignments. This can be proven when 1.7 million students in Malaysia face digital poverty involving the provision of devices, internet access, printers and so on, affecting student learning performance (Lee, 2021). Ownership of digital tools for PdP purposes needs to be in line with the technological knowledge possessed by a student so that the failure of students to attend lectures and complete course assignments does not occur. To address this issue, the implementation of the Bilik Komputer Infaq Al-Kauthar Program has successfully launched two computer rooms that can be accessed 24 hours a day for student use throughout the PdP session. Each computer room is equipped with four laptops, a laser printer and various additional facilities such as study desks, stationery and internet networks. This program started in early 2024 and received support from various parties. In fact, this program has been well received among students as it benefits them, especially becoming a focal point for completing academic assignments and projects individually and in groups. Since it was opened, this computer room has become a gathering place for students to discuss

research, academic assignments and presentations. What is interesting is that all the laptops and facilities provided by this program are the result of infaq from faculty members, USIM alumni and the public. This program is able to create a conducive learning environment that encourages students to engage in intellectual activities such as thinking, calculating and analyzing something well and effectively (Duvivier et al., 2022).

RESEARCH METHODOLOGY

This study uses a quantitative method through questionnaires. This study was conducted at the Faculty of Economics and Muamalat, USIM involving undergraduate students. The questionnaire forms were distributed through the Google Form platform. Purposive sampling technique was used to distribute 200 questionnaire forms to students at FEM. Out of the total questionnaires distributed, only 149 questionnaires were fully answered and returned and can be used for the purpose of this study. The respondents involved in this study answered the questionnaire voluntarily and without coercion.

The questions in the questionnaire form were designed to obtain information on the background of the students, their experience with the welfare programs, as well as their views and suggestions to improve the effectiveness of the programs. The data collection process was conducted throughout June 2024. Students were asked to fill out the questionnaire voluntarily and the information provided was guaranteed confidentiality. This step is important to ensure that students feel comfortable to provide honest and open feedback. After the data collection process is complete, descriptive analysis has been conducted to examine the patterns and trends of the collected data. This approach was chosen to provide a clear picture of the current situation and issues faced by students regarding welfare programs at the faculty. The results of this descriptive analysis were then used to identify areas for improvement in the welfare programs as well as suggestions that can be considered by the faculty.

RESPONDENT PROFILE

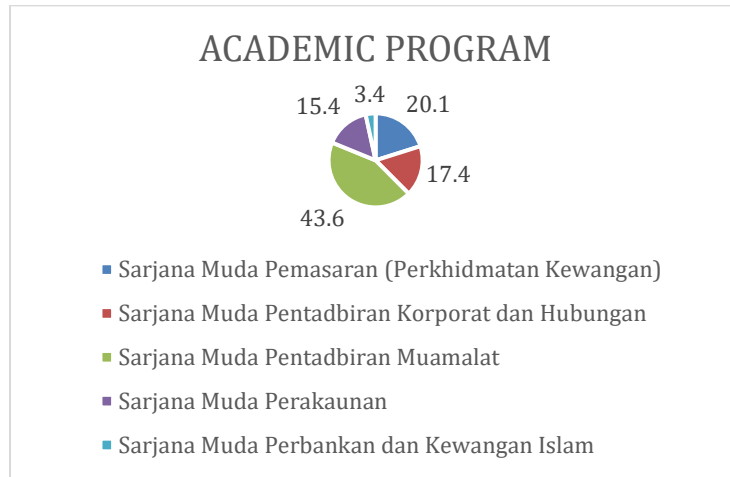


Chart 1: Percentage of Respondents by Academic Program

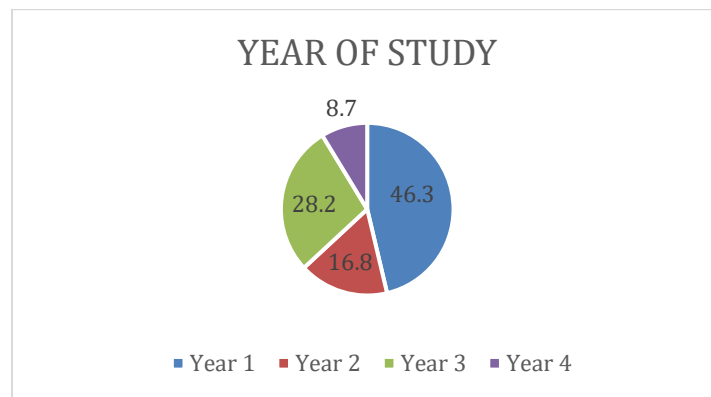


Chart 2: Percentage of Respondents by Year of Study

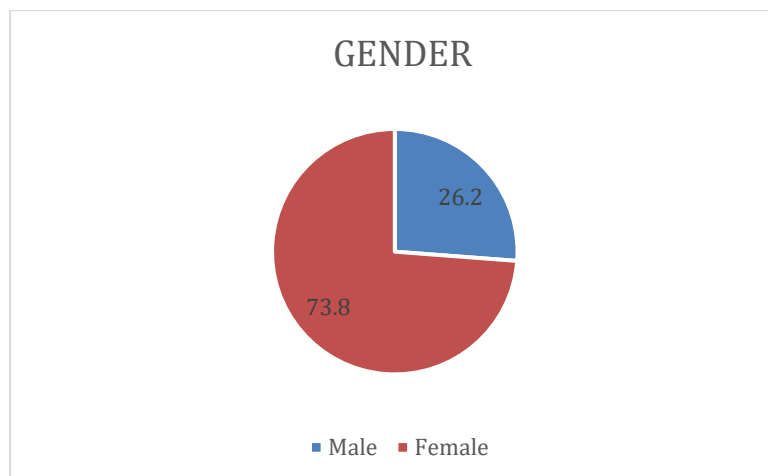


Chart 3: Percentage of Respondents by Gender

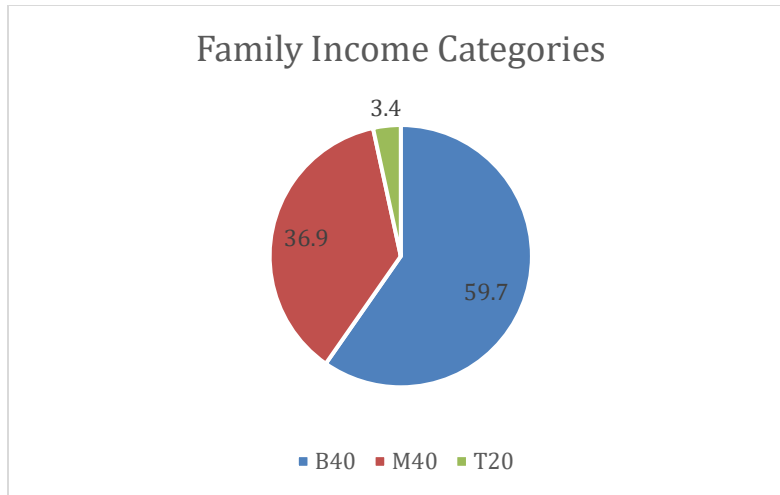


Chart 4: Percentage of Respondents by Family Income

Charts 1, 2, 3 and 4 represent the percentage profile of the respondents in this study. The demographic profile of the year of study shows that the majority of them are third-year students (28.2%), while in terms of academic program, the majority are from the Bachelor of Financial Services Marketing Program (43.6%). The demographic profile of the respondents shows that the majority of them are from the B40 group (59.7%), followed by M40 (36.9%) and T20 (3.4%). This shows that the FEM welfare program has successfully reached the target group consisting of students who are truly in need. In terms of gender, 73.8% of the respondents are female, while 26.2% are male.

ASSISTANCE RECEIVED

Chart 5 shows that 56.4% did not receive any form of financial assistance. A total of 28.2% received zakat assistance, 12.1% received scholarships, and 3.4% received both zakat and scholarships. This data shows that there is still a large number of students who do not receive the assistance they should. Therefore, there is a need to increase the dissemination of information about available assistance and facilitate access to such assistance.

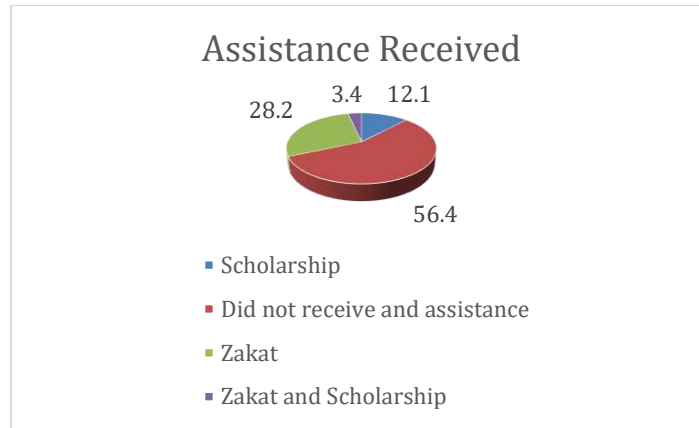


Chart 5: Percentage of Respondents by Assistance Received

AWARENESS AND USE OF THE GEROBOK REZEKI PROGRAM

Chart 6 shows that awareness of the FEM Gerobok Rezeki program is very high, with 97.3% of respondents knowing about this program. Of this amount, 83.9% use this program to get breakfast. The majority of students use this program occasionally (58.4%), followed by once a week (14.8%), 2-3 times a week (10.1%), every day (4.7%), and rarely (12.1%). This is illustrated in Chart 7.

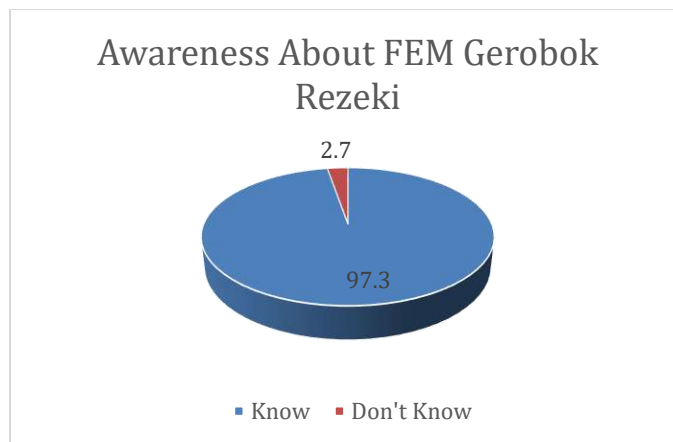


Chart 6: Percentage of Respondents by Awareness of Gerobok Rezeki

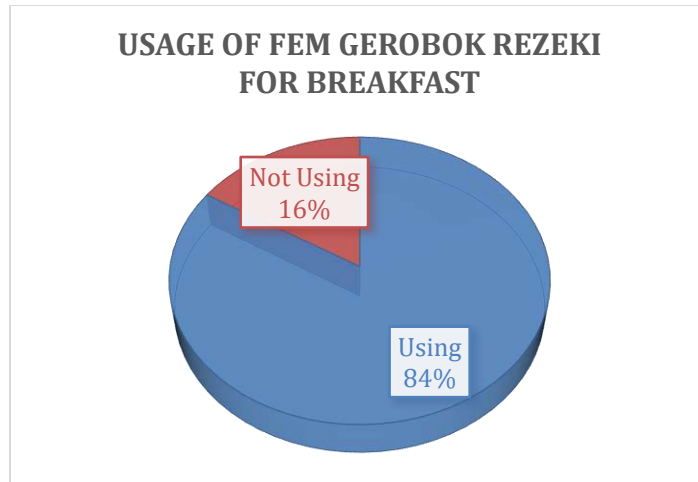


Chart 7: Percentage of Respondents by Use of Gerobok Rezeki for Breakfast

IMPACT ON ACADEMIC PERFORMANCE AND WELL-BEING

The FEM Gerobok Rezeki program has a positive impact on the academic performance and well-being of students, and this impact is illustrated in Chart 8. A total of 45.6% of respondents stated that this program slightly improved their academic performance, while 23.5% stated a significant improvement. A total of 30.9% did not see a significant effect. In the context of class attendance, 39.6% stated that they arrived earlier, 32.9% arrived slightly earlier, and 27.5% did not see a significant effect, as shown in Chart 9.

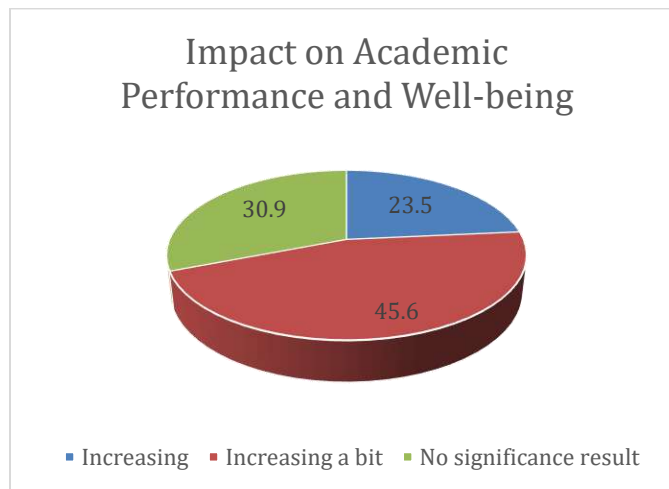


Chart 8: Percentage of Respondents by Impact on Academic Performance and Well-being

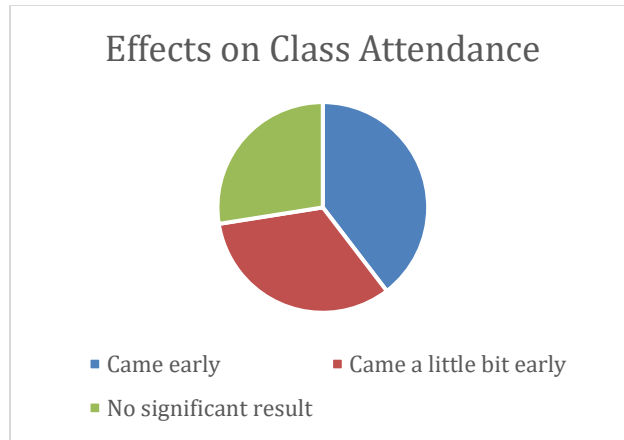


Chart 9: Percentage of Respondents by Impact on Class Attendance

AWARENESS AND USE OF BILIK KOMPUTER INFAQ AL-KAUTHAR

Chart 10 shows that awareness of the Bilik Komputer Infaq Al-Kauthar is 62.4%, while 37.6% do not know about it. Of those who know, only 23.5% use this computer room. Chart 11 shows that 76.5% do not use this facility, indicating that there is room to increase awareness and use of this computer room.

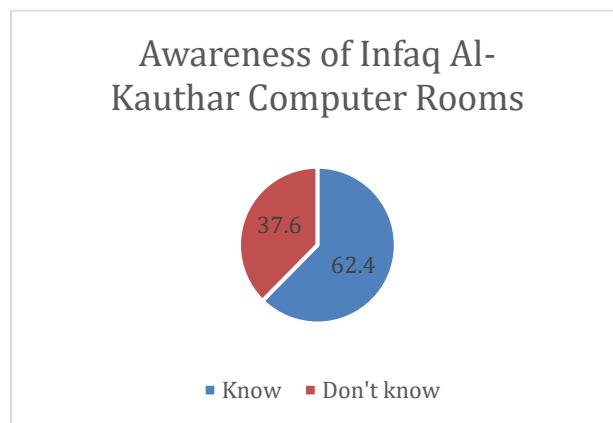


Chart 10: Percentage of Respondents Based on Awareness of Infaq Al-Kauthar Computer Room

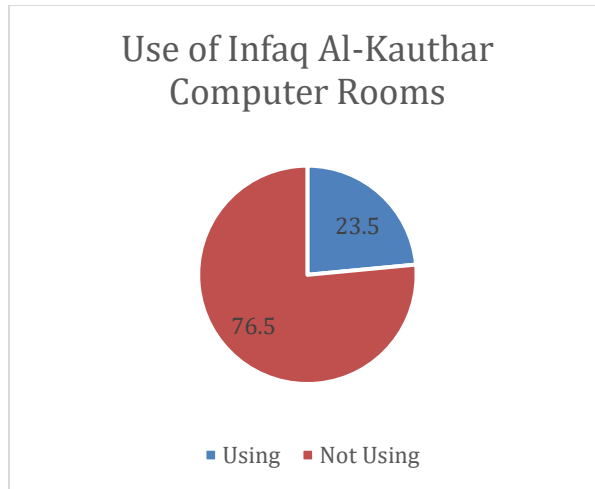


Chart 11: Percentage of Respondents Based on Use of Infaq Al-Kauthar Computer Room

Chart 10 shows that awareness of the Infaq Al-Kauthar Computer Room is 62.4%, while 37.6% are unaware of it. Of those who know, only 23.5% use this computer room. Chart 11 shows that 76.5% do not use this facility, indicating that there is room to increase awareness and use of the computer room.

EVALUATION OF QUALITY AND ACCESSIBILITY OF THE COMPUTER ROOM

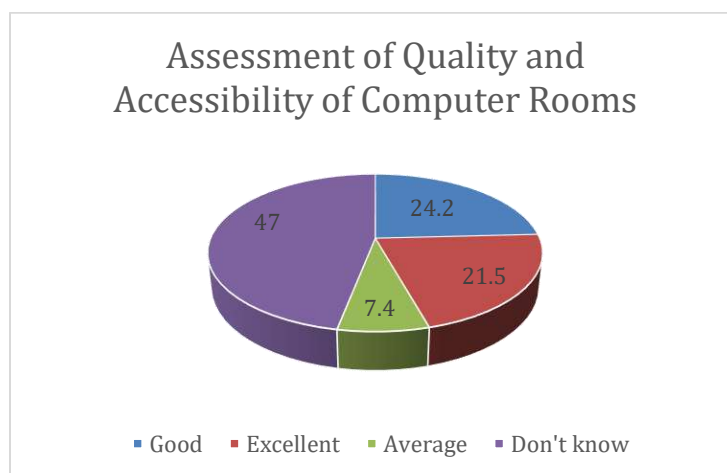


Chart 12: Percentage of Respondents Based on Quality and Accessibility Assessment of the Computer Room

Chart 12 shows that in evaluating the quality and accessibility of the computer room, 24.2% rate it as good, 21.5% very good, 7.4% average, and 47.0% do not know. This data indicates that there is a need to increase promotion and knowledge about the quality and accessibility of this computer room.

IMPACT ON ACADEMIC STUDIES AND RESEARCH

Chart 13 shows the impact of the Infaq Al-Kauthar computer room on students' academic studies and research as follows: 14.8% report a significant improvement, 25.5% a slight improvement, 11.4% see no significant effect, and 48.3% do not know. This indicates that there is a need to increase awareness about the benefits of this computer room to students.

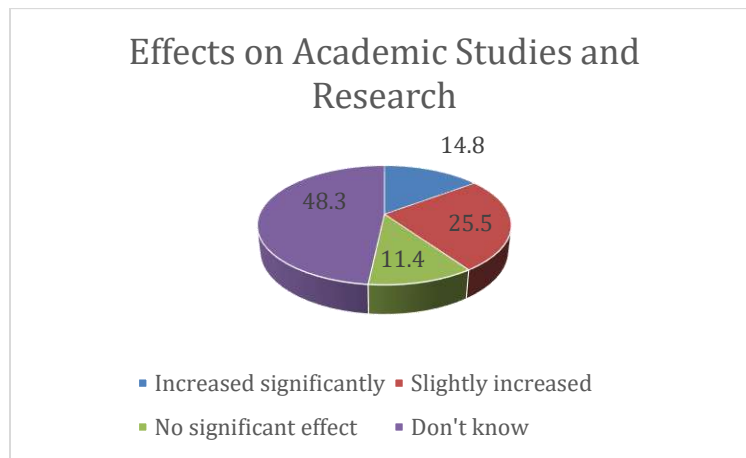


Chart 13: Percentage of Respondents Based on Effect on Academic Studies and Research

IMPACT, HOPES AND CONCLUSION

With the implementation of the Gerobok Rezeki and Computer Room initiatives, the authors hope to provide significant assistance to needy students at FEM. The main goal is to ensure they can focus fully on their studies without worrying about basic needs such as food and access to digital learning resources. This will enable them to reach their full academic potential.

In addition, the authors also hope this project can inspire more similar initiatives in other faculties and educational institutions across the country. By

setting an example, the authors hope to open the eyes of others to the challenges faced by underprivileged students, thus encouraging them to take proactive action in helping. On a broader level, this initiative is expected to build a spirit of togetherness and social awareness among students and staff. By seeing how the campus community helps and supports each other, it will encourage them to also participate in efforts to empower peers in need. This will create a stronger culture of care and social responsibility among the campus community. Overall, the authors are confident these initiatives will have a very meaningful impact, not only on the students being helped, but also on the campus community as a whole. This is in line with the vision to create an FEM that mutually supports and uplifts the well-being of all students.

In conclusion, the welfare initiatives implemented by FEM have had a positive impact on student well-being and academic performance. Programs such as FEM's Gerobok Rezeki have successfully provided high-quality and nutritionally valuable food assistance to students in need. Although there are some shortcomings in the implementation of this program, improvement suggestions given by students can help increase the effectiveness of this program in the future. To ensure these welfare programs are more effective, it is important to increase awareness about available assistance and facilitate access to such assistance. In addition, the provision of facilities such as computer rooms needs to be promoted more actively so that more students can benefit from them. By considering these improvement suggestions, FEM can continue to enhance the well-being and academic performance of students in need.

REFERENCES

- Abdul Aziz, A. R., Shafie, A. A. H., Mohd Soffian Lee, U. H., & Raja Ashaari, R. N. S. (2020). Strategi Pembangunan Aspek Kesejahteraan Kendiri Bagi Mendepani Tekanan Akademik Semasa Wabak COVID-19. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 5(12), 16–30.
- Afzan, A., Bin, I., & Abd, H. (2021). Isu Dan Cabaran Dalam Pelaksanaan Pendidikan Peringkat Rendah Dan Menengah : Pendekatan Malaysia Semasa Pandemik Covid-19 Abstrak Issues And Challenges In The Implementation Of Primary and Secondary Education : Malaysia ' s

- Approach During the Covid-19 Pandemic. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 6(9), 1–13.
- Amran, N. A. A. & M. S. (2021). Perspektif Guru Terhadap Penglibatan Murid Dalam Pengajaran Dan Pembelajaran Secara Atas Talian Semasa Pandemik Covid-19 di Malaysia. *International Journal Advanced Research In Islamic Students and Education Arise*, 1(4), 32–39
- Benson, J., & Goldrick-Rab, S. (2018). Towards a more accurate understanding of food insecurity among college students: Results from the Wisconsin HOPE Lab. *Journal of Public Affairs*, 18(4).
- Briones, S. K. F., Dagamac, R. J. R., David, J. D., & Landerio, C. A. B. (2022). Factors affecting the students' scholastic performance: A survey study. *Indonesian Journal of Educational Research and Technology*, 2(2), 97-102
- Dhakal, K. R. (2020). Factors Affecting Academic Performance of Students at Community Secondary School in Nepal. *Merit Research Journal of Education and Review*, 8(9), 165–170
- Duvivier, R. J., Xu, X., & Bos, N. A. (2022). A Conducive Learning Environment In International Higher Education : A systematic Review Of Research On Students ' Perspectives. *Elsevier*, 37(June), 15.
- Dynarski, S. M. (2003). Does aid matter? Measuring the effect of student aid on college attendance and completion. *American Economic Review*, 93(1), 279-288.
- Goldrick-Rab, S., & Kendall, N. (2014). Redefining college affordability: Securing America's future with a free two year college option. *The Education Optimists*.
- Goldrick-Rab, S., Kelchen, R., Harris, D. N., & Benson, J. (2016). Reducing income inequality in educational attainment: Experimental evidence on the impact of financial aid on college completion. *American Journal of Sociology*, 121(6).
- Johan, J. (2020). Ungku Aziz Ikon Ilmuwan Bangsa. *Sinar Harian*. <https://Www.Sinarharian.Com.My/Article/115140/PROFIL-DI-SEBALIKBERITA/Ungku-Aziz-Ikon-Ilmuwan-Bangsa>. (accessed 20 April 2021)

- Jury, M., Smeding, A., Stephens, N. M., Nelson, J. E., Aelenei, C., & Darnon, C. (2017). The experience of low-SES students in higher education: Psychological barriers to success and interventions to reduce social-class inequalities. *Journal of Social Issues*, 73(1), 23-41.
- Kezar, A. (2011). Grassroots leadership: Encounters with power dynamics and oppression. *International Journal of Qualitative Studies in Education*, 24(4), 471-500.
- Marquez, L. P., Verone, M., Olivar, V., Eco, C., Ombao, R. P., Cerio, W. C., & Deogracias, F. (2020). Education and Covid-19: Experiences and Insights from A Developing Country. *Contemporary Issues in Education*, 40(1), 84-90
- Mohamed, S. A. R, Mohd, F. M. H, Ariffin, M. S., & Noraini, I. (2011). Poverty measurement in Malaysia: A survey of the literature. *Akademika*, 81(1)
- Nur Syawal Syazwani Ibrahim & Norfatiha Othman. (2022). Faktor Kemiskinan Digital dalam kalangan Pelajar Terhadap Prestasi Belajar Ketika Pandemi Covid-19. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(8)
- Othman, R., Othman, N., & Rosli, H.F., (2021). Keciciran Pelajar Di Peringkat Pendidikan Tinggi: Punca Dan Penyelesaiannya. *Jurnal Dunia Pendidikan*, 3 (1), 738-747.
- Perna, L. W., & Li, C. (2006). College affordability: Implications for college opportunity. *NASFAA Journal of Student Financial Aid*, 36(1), 7-24.
- Rowntree, S. (1901). *Poverty: A study of town life*. London: Macmillan
- Townsend, P. (1979). *Poverty in United Kingdom: A survey of household resources and standards of living*. London: Penguin.
- UNESCO. (2016). Learning to live together: Poverty. UNESCO <http://Www.Unesco.Org/New/En/SocialandHumanSciences/Themes/Internationalmigration/Glossary/Poverty/pdf>. (accessed 14 July 2024)
- Van Der Werf, M., & Sabatier, G. (2009). *The college of 2020: Students*. Chronicle Research Services.

THE IMPORTANCE OF ESG PRACTICES AMONG MUSLIM SMES IN MALAYSIA: A CRITICAL LITERATURE REVIEW

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Abstract

Environmental, Social, and Governance practices have become extremely important in the global business context. The significance of these practices is particularly apparent for Small and Medium Enterprises, many of which operate in developing countries. However, more in-depth analyses on the role of ESG practices and the way they are influenced by the Islamic cultural background, local law and policy, as well as global business trend, are needed. Thus, in this critical literature review, the role of ESG practices of Muslim SMEs, the environmental, social, and governance challenges and opportunities, Islamic stewardship, fair and ethical labor, and Shariah-compliance are discussed. The report also identifies the main forces behind and obstacles to ESG adoption, including a lack of resources and an inadequate number of ESG frameworks. The review's findings show that Islamic teaching offers a great foundation for taking ESG factors into account; yet, more instruction, unified frameworks, and governmental regulations must be implemented. Lastly, recommendations for more research are made, along with a broad description of developmental patterns.

Keywords: ESG practices, Muslim SMEs, Islamic business ethics, Sustainable development, Shariah-compliant governance

INTRODUCTION

Over the past few years, environmental social governance has gained significant attention in the global business community. It is no longer a secret that a lot of businesses face ongoing pressure to be more socially and environmentally responsible. One of the key factors that determines a company's long-term success and the value it adds to society is ESG. Because the ESG approach may be seen as a delicate balancing act between sustainable development and economic growth, small and medium-sized enterprises (SMEs) in developing nations have a lot at stake. This study is intriguing due to its intricate fusion of Islamic principles, corporate procedures, and environmental, social, and governance elements. On the one hand, Muslim Medium and Small Enterprises are very important for Malaysia's economic context as they provide a considerable share of employment and GDP (Abdullah et al., 2020) . However, their unique approach to the interaction between business and Islam in addition to ESG issues calls for a careful, in-depth examination. Because of this, it's crucial to undertake a critical literature research in order to comprehend the following points within the writing framework while discussing the implementation of ESG practices in Malaysian SMEs run by Muslims. This review will examine the intertwining of Islamic business principles with national regulations and global ESG

trends in Malaysia, providing insights into current status as well as future acceptance among SMEs.

ENVIRONMENTAL CONSIDERATIONS

Because Malaysia has a wealth of natural resources and biodiversity, environmental ESG practices would be vital, particularly in eco-friendly entrepreneurship for Muslim SMEs that practice nature conservation from an Islamic perspective. Given the importance of SMEs as linchpins, this section will go deeper into the numerous components that show environmental issues, difficulties, and opportunities.

Islamic Environmental Ethics and Stewardship

One of them is the idea of *khalifah* (stewardship), inherent in Islamic beliefs making it a robust basis for conservation. This principle suggests that it is the duty of mankind to save and safeguard nature (Abas & Hanifah, 2014). The Quran and Hadith contain numerous verses emphasizing the need of environmental protection and sustainable resource utilization. Kamali (2010) further suggests that the Islamic institution of *hima* (environment protection), which can perhaps be seen as a precursor to environmental protection reveals deep roots in environmental concern within Islam. This might be particularly important for Muslim SMEs in sectors like agriculture, forestry and fisheries where most of the time they are directly involved with natural resources. Furthermore, the Islamic idea of *mizan* (balancing) abhors excess and encourages a wise use of resources while supporting striking a balance between development on the one hand and environmental conservation on the other, which should be firmly enshrined by decision makers across countries (Hasan, 2006). The contemporary understanding of the triple pillar view on sustainable development supports this philosophy and will therefore act as a powerful driver to encourage Muslim SMEs sustainability.

Environmental Challenges and Opportunities

Waste management, energy efficiency and carbon emissions reduction are among the key environmental issues faced by Malaysian SMEs corresponding to their sector. According to Rahim et al. (2017), many Muslim SMEs in Malaysia have knowledge concerning environmental matters. However, they adopt very few green practices. The scholars argue that this gap is partly attributed to the lack of resources. In addition, the entrepreneurs at these firms have an inferior understanding concerning the concept and tend to overestimate the potential costs of the adopted green methods. However, the authors note that opportunities for environmental innovation exist. While not put as such, Zainuddin et al.(2018) suggest that Muslim SMEs could use financial vehicles related to Islamic finance to fund green ventures. In particular, this

might refer to green sukuk, which is compliant with the Shariah and reduces other financial barriers for ESG implementation.

Government Initiatives and Policies

Particularly in Malaysia, the government has implemented a number of initiatives to foster among SMEs a feeling of environmental responsibility. It coincides with efforts to improve the country's environmental credentials. The National Environmental Policy, as well as the Green Technology Master Plan 2017-2030, serve as the foundation for long-term growth (Isa et. al., 2021). These policies allow Muslim SMEs to match their activities with national environmental goals.

SOCIAL CONSIDERATIONS

For a Muslim SME in Malaysia, the social side of ESG is critical. Islamic teachings are based on societal welfare, and Malaysia's diversity necessitates thoughtful examination on social factors. To expand sustainably, small and medium-sized firms must balance religious convictions, stakeholder interests, and social impact.

Islamic Social Ethics

Islamic business ethics emphasized on social responsibility, worker fairness and community development (Hassan & Salma, 2009). These all sound in-keeping with modern ESG social issues. *Maslahah* (public interest) is clear Islamic doctrine in which human welfare and public priorities should take precedence over personal gains, as Dusuki (2008), argues that can provide firms with reference tools ensuring reasonable divergence from the ultimate goal of profit-maximization.

Labor Practices and Human Rights

According to Jamil et al. (2015), Muslim SMEs in Malaysia primarily used fair labor practices as a result of a combination of Islamic teaching and national legal obligations. Gender equality and minority group inclusion, for example, are ongoing issues. Syed and Van Buren (2014) argue that improving gender equity in Muslim-led firms necessitates a knowledge of Islamic beliefs about labor practices.

Community Engagement and Philanthropy

Islam promotes compassion and a sense of community. *Zakat* (obligatory almsgiving) and *sadaqah* (voluntary humanitarian donation) are the foundations of Islamic social ethics (Ab Rahman et al., 2012). According to Mohd Noor et al. (2015), the majority of Muslim SMEs in Malaysia engage in such philanthropic activities because they believe it is a religious requirement, as well as networking for social capital.

Diversity and Inclusion

Islamic SMEs faces the challenge in diversity and inclusion made possible with Malaysia as a multi-racial country. Despite the fact that Islamic teachings emphasize equality and justice, various cultures may occasionally make exceptions based on geography. Syed and Özbilgin (2009) suggest an approach that recognizes the culture-bound nature of diversity management concepts, by arguing for culturally sensitive approaches to vet those that are compatible with Islamic values and contemporary equality notions.

GOVERNANCE CONSIDERATIONS.

Durable governance is critical to the long-term success and resilience of SMEs. Muslim SMEs in Malaysia's governance methods are influenced by Islamic precepts and modern corporate governance norms. It is critical to connect internal organizational and decision-making frameworks with religious principles while conducting commerce, both for the long-term health of the firm and stakeholder conviction in the trade.

Islamic Governance Principles

Principles of Islamic governance, highlight *amanah* (trust) and '*adalah* (justice), have a strong ethical resonance in corporate operations(Muneeza and Hassan, 2014). These are values around transparency, accountability and ethics. According to Hasan (2009), Islamic principles of governance are consistent with current corporate governance systems but can provide value in areas such as moral leadership and stakeholder involvement.

Challenges in Governance Implementation

Despite the strong ethical framework that Islamic teachings provide, many Muslim SME owners in Malaysia continue to struggle with effective governance practices. According to Zain et al. (2014), SME owners recognize the necessity of effective governance but are frequently unable to build a thorough framework for excellent corporate governance in their own firms due to a lack of knowledge or resources. The disparity between Islamic ethical ideals and governance practices demonstrates the need for targeted support as well as capacity-building interventions to help Muslim SMEs figure out how to best overcome these constraints by institutionalizing strong corporate governance mechanisms. Many SMEs operate informally, which hampers governance implementation. Razak et al. (2020) highlight the necessity of governance frameworks that may be adjusted to the unique characteristics of SMEs while balancing formality and flexibility.

Regulatory Environment and Compliance

The Malaysian regulatory context has a considerable impact on the governance practices of SMEs. The Malaysian Companies Act 2016 and the Malaysian Code on Corporate Governance provide legal and regulatory foundations for business governance (Securities Commission Malaysia, 2017). Some of these policies, however, may be created for large businesses and hence not directly applicable or accessible to SMEs (Yusoff & Alhaji, 2012).

According to the Islamic Financial Services Act, the following example of banks functioning under formal governance frameworks demonstrates how interest-based models affect banking trends, as well as how Islamic principles might be applied within such institutions (Bank Negara Malaysia, 2013). This concept can be expanded to benefit additional Muslim-owned small businesses.

The Role of Shariah Governance

Shariah governance is an important issue for Muslim SMEs participating in Islamic financing or halal industries. Shariah governance ensures the correct functioning of business operations and the validity of financial transactions under Islamic law (Hasan, 2012). Shariah governance principles and concepts are most commonly associated with Islamic financial institutions, but they also provide valuable lessons for Muslim SMEs seeking to adapt to ESG issues.

DRIVERS AND BARRIERS TO ESG IMPLEMENTATION

For the purpose of creating strategies that effectively promote sustainable business practices, it is essential to comprehend the elements that either facilitate or obstruct the adoption of ESG among Muslim SMEs in Malaysia.

Drivers of ESG Implementation

One of the factors which have a significant impact on the implementation of ESG practices among Muslim Small Medium Enterprises in Malaysia is the Islamic teachings related to environmental stewardship, social responsibility and ethical governance. As Abas and Hanifah (2014) argue, a wide range of such socio-religious practices are influential. Moreover, the market-based impact of the ESG adoption is accelerated by a number of factors affecting consumer behavior which are ever increasing in their importance for all types of companies including Muslims Small Medium Enterprises. There is no doubt that the key reason why SMEs in Malaysia are able to use ESG financing is the development of Islamic finance in this country (Zainuddin et al., 2018). Along with that, green technology incentives are being nationalized. Finally, organizations which do business in accordance with ESG principles. are able to develop a good reputation first by adopting ESG and second by

acting in a fair and just manner thus affecting the ways in which the stakeholders respond and paving the ways towards the possible enhancement of economic prospects.

Challenges with ESG Implementation

In fact, due to a lack of funding and personnel, small and medium-sized businesses (SMEs) usually find it difficult to implement one of the three fundamental types of investments in ESG projects. Moreover, according to Zain et al. (2014), a large number of managers and owners of SMEs are not familiar with the ESG concepts provided by the acquired knowledge crosscheck technique.

SMEs may be deterred from adopting ESG practices as a result, citing perceived high costs and little immediate advantages (Yusoff & Alhaji, 2012). Moreover, it may be difficult to readily adjust current ESG standards and criteria to the demands of small businesses because they are frequently created for larger organizations (Razak et al., 2020). Syed and Özbilgin (2009) assert that the application of ESG rules might be impeded by conventional business practices, particularly when it comes to topics such as environmental preservation and gender equality.

PROSPECTS AND FUTURE RECOMMENDATIONS

Several crucial elements for promoting ESG adoption by Malaysian Muslim small and medium-sized enterprises (SMEs) have been identified by a thorough review of the body of research. The first step is to step up educational initiatives to raise awareness among managers and owners of SMEs about ESG issues and how they relate to Islamic beliefs (Zain et al., 2014). Lastly, closing this knowledge gap will assist SMEs in understanding the advantages and strategies for putting ESG practices into reality.

According to Razak et al. (2020), there is a possibility that the adoption of ESG frameworks and standards will grow if they are customized to the specific features and constraints of SMEs. Often, one-size-fits-all approaches fall short in meeting the unique requirements of a small business. Currently, there is limited empirical evidence that local Islamic financing products and services supplied by Malaysian financial institutions provide an additional incentive or support for ESG adoption among M SMEs (Zainuddin et al., 2018). This is where the expansion of Shariah-compliant financing methods could help, playing an important role in assisting SMEs in their quest for sustainable development.

Furthermore, government policies such as tax breaks or preferential treatment in public procurement should be implemented to encourage more SMEs to embrace sustainable practices (Ministry of Energy, Science, Technology, Environment, and Climate Change, 2017). Policy assistance can help to offset the perceived costs of ESG implementation and provide mainstream advantages instead.

CONCLUSION

After reviewing the current literature, it can be concluded that ESG practices are critical for Muslim SMEs in Malaysia. The strong correlation between Islamic directions and ESG ideas provides a solid foundation for the development of sustainable activities. However, significant concerns continue due to some variations in scope. Specifically, resource constraints, knowledge gaps, and the need for customized frameworks remain the primary concerns. An analysis of these and other factors revealed that the future of ESG implementation among Muslim SMEs in Malaysia will be determined by a mix of factors. Growing awareness and education efforts, successful government regulations, unique financial instruments and possibilities, and the development of culturally suitable ESG frameworks are some of the examples. Ultimately, these challenges may be resolved, and Malaysia has the opportunity to become a pioneer in sustainable SME development by demonstrating that Islamic pillars are consistent with modern ESG practices. In light of shifting international economic conditions, ESG adoption will become even more important for Malay Muslim SMEs. Thus, additional research is needed to develop particular ESG implementation methodologies and examine their long-term consequences on actual performance, social domains, and the environment.

REFERENCES

- Ab Rahman, A., Alias, M. H., & Omar, S. M. N. S. (2012). Zakat institution in Malaysia: Problems and issues. *Global Journal Al-Thaqafah*, 2(1), 35-41.
- Abas, N., & Hanifah, N. A. (2014). Islamic environmental ethics: The theoretical framework. In *Proceedings of the International Conference on Science, Technology and Social Sciences (ICSTSS) 2012* (pp. 757-764). Springer, Singapore.
- Abdullah, N. H., Shamsuddin, A., Wahab, E., & Hamid, N. A. A. (2020). Sustainability among Malaysian SMEs: A systematic literature review. *International Journal of Financial Research*, 11(2), 122-132.
- Bank Negara Malaysia. (2013). *Islamic Financial Services Act 2013*. Kuala Lumpur: Bank Negara Malaysia.
- Dusuki, A. W. (2008). What does Islam say about corporate social responsibility? *Review of Islamic Economics*, 12(1), 5-28.
- Hasan, A. (2009). Corporate governance: Western and Islamic perspectives. *International Review of Business Research Papers*, 5(1), 277-293.

- Hasan, Z. (2006). Sustainable development from an Islamic perspective: Meaning, implications, and policy concerns. *Journal of King Abdulaziz University: Islamic Economics*, 19(1), 3-18.
- Hasan, Z. (2012). Corporate governance in Islamic financial institutions: An ethical perspective. *Prime Journal of Business Administration and Management*, 2(1), 405-411.
- Hassan, A., & Salma Binti Abdul Latiff, H. (2009). Corporate social responsibility of Islamic financial institutions and businesses: Optimizing charity value. *Humanomics*, 25(3), 177-188.
- Isa, N. M., Sivapathy, A., & Adjrina Kamarruddin, N. N. (2021). Malaysia on the way to sustainable development: Circular economy and green technologies. In *Modeling Economic Growth in Contemporary Malaysia* (pp. 91-115). Emerald Publishing Limited.
- Jamil, C. Z. M., Mohamed, R., Muhammad, F., & Ali, A. (2015). Environmental management accounting practices in small medium manufacturing firms. *Procedia-Social and Behavioral Sciences*, 172, 619-626.
- Kamali, M. H. (2010). Environmental care in Islam: A Quranic perspective. *Islam and Civilisational Renewal*, 1(2), 261-283.
- Ministry of Energy, Science, Technology, Environment and Climate Change. (2017). *Green Technology Master Plan Malaysia 2017-2030*. Putrajaya: Government of Malaysia.
- Mohd Noor, A. H., Isa, N. A. M., Mohd Nor, M. A., & Hashim, H. A. (2015). Corporate social responsibility: An overview from Malaysia. *Journal of Applied Environmental and Biological Sciences*, 4(10S), 82-87.
- Muneeza, A., & Hassan, R. (2014). Shari'ah corporate governance: The need for a special governance code. *Corporate Governance*, 14(1), 120-129.
- Rahim, R., Jalaludin, F. W., & Tajuddin, K. (2017). The importance of corporate social responsibility on consumer behaviour in Malaysia. *Asian Academy of Management Journal*, 16(1), 119-139.
- Razak, D. A., Abdullah, M. A., & Ersoy, A. (2020). Small medium enterprises (SMEs) in Turkey and Malaysia: A comparative discussion on issues and challenges. *International Journal of Business, Economics and Law*, 10(49), 2-16.
- Securities Commission Malaysia. (2017). *Malaysian Code on Corporate Governance*. Kuala Lumpur: Securities Commission Malaysia.
- Syed, J., & Özbilgin, M. (2009). A relational framework for international transfer of diversity management practices. *The International Journal of Human Resource Management*, 20(12), 2435-2453.

- Syed, J., & Van Buren, H. J. (2014). Global business norms and Islamic views of women's employment. *Business Ethics Quarterly*, 24(2), 251-276.
- Yusoff, W. F. W., & Alhaji, I. A. (2012). Insight of corporate governance theories. *Journal of Business & Management*, 1(1), 52-63.
- Zain, M. M., Darus, F., Yusoff, H., Amran, A., Fauzi, H., Purwanto, Y., & Naim, D. M. A. (2014). Corporate ibadah: An Islamic perspective of corporate social responsibility. *Middle-East Journal of Scientific Research*, 22(2), 225-232.
- Zainuddin, Z. N., Zailani, S., Govindan, K., Iranmanesh, M., & Amran, A. (2018). Determinants and outcome of a clean development mechanism in Malaysia. *Journal of Cleaner Production*, 142, 1979-1986.

ENHANCING SME SUSTAINABILITY IN MALAYSIA'S ICT SECTOR: CHALLENGES AND STRATEGIES

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Abstract

Business sustainability is becoming more crucial for small and medium-sized enterprises (SMEs) in the Information and Communication Technology (ICT) sector as they deal with changing markets, fast technological progress, and increasing environmental and social demands. Corporate entrepreneurship, characterised by its focus on innovation, proactivity, competitiveness, risk-taking, and autonomy inside a company, offers a strategic opportunity for ICT SMEs to improve their long-term viability. Nevertheless, the process of establishing this integration is not without its difficulties, such as limited resources, opposition to change, and a dearth of knowledge and innovation. A major obstacle faced by ICT SMEs is the scarcity of resources, including financial, human, and technological, which might impede their capacity to engage in sustainable innovations. In addition, establishing a culture of corporate entrepreneurship may encounter internal opposition, as employees and management may be acclimated to conventional business methods. In order to surmount these obstacles, small and medium-sized enterprises in the field of information and communication technology might implement many approaches. Firstly, they might utilise external partnerships and collaborations to gain access to supplementary resources and distribute the risks linked to sustainability projects. Furthermore, adopting gradual modifications instead of drastic overhauls might facilitate the process and minimise opposition. Furthermore, by integrating sustainability with fundamental business objectives through corporate entrepreneurship, the company may effectively incorporate sustainable practices into its strategic orientation. This integration transforms sustainability into a catalyst for innovation, rather than a mere cost centre. Through the implementation of specific tactics, ICT SMEs can effectively incorporate corporate entrepreneurship into their business activities, resulting in long-term and steady expansion. This approach not only allows them to adjust to market fluctuations and take advantage of new possibilities, but also strengthens their ability to withstand challenges and remain competitive in the long run, while positively impacting environmental and social results.

Keywords: business sustainability, ICT industry, corporate entrepreneurship, sustainability

INTRODUCTION

Sustainability has emerged as a captivating subject for both professionals and researchers. The concept of sustainability is a subject that is often discussed and disputed. The term "sustainability" was initially employed in the 1987 report of the United Nations Brundtland Commission to denote the concept of satisfying present

need without jeopardising the capacity of future generations to meet their own needs. The topic concerns the deterioration of the environment and how it affects the health of individuals, social well-being, and economic development (Yusof et al., 2019).

Business sustainability refers to the practice of businesses aiming for long-term financial success while simultaneously creating a beneficial impact on society and minimising their environmental footprint. It is the intersection of profit, society, and the environment. Information and Communication Technology (ICT) Small and Medium-sized Enterprises (SMEs) play a crucial role in the development of social business inside the corporate environment since they are significant catalysts for economic growth and job creation in numerous countries. SMEs remain significant in the ongoing discourse on sustainability due to their pivotal role in driving social advancement and economic growth. SMEs face four primary barriers to expansion, which are common among other developing nations. These obstacles include restricted availability of funds, difficulties in exploring and expanding into new markets, issues in attracting and retaining top talent, and struggles in adopting and using appropriate technologies.

The ICT industry in Malaysia

During the pandemic, the ICT industry in Malaysia experienced substantial expansion, making up 22.6% of the country's GDP in 2021. Both the government and corporate sector are actively spearheading a comprehensive digital revolution across the country with the aim of positioning Malaysia as a prominent global economic contender in the future. The objective of the government's MyDIGITAL program is to transform Malaysia into a technologically advanced, high-income country and a leading digital economy in the region by 2030. The plans heavily rely on key digital technologies such as Artificial Intelligence (AI), Big Data Analytics, Cloud Computing, and Internet of Things (IoT).

ICT is crucial for the advancement of education, the improvement of organisational relationships, and the effective management of commercial projects, all of which contribute to socioeconomic growth. U.S. corporations have notable prospects in the field of ICT, especially in new digital technologies. ICT plays a crucial role in supporting the United Nations' Sustainable Development Goals by providing the essential infrastructure. Malaysia's ICT policies encompass the Digital Malaysia project, which prioritises the advancement of digital business and the enhancement of skills, as well as the National Fiberization and Connectivity Plan (NFCP), which strives to enhance broadband access throughout the country. In addition, Malaysia is making progress in developing Smart Cities and IoT efforts to enhance urban services and promote sustainability.

The primary factors used to categorise a small and medium-sized enterprise (SME) are the quantity of personnel and the amount of financial resources. In the United States, small and medium-sized enterprises (SMEs) are classified as businesses

that have a workforce of less than 500 employees. In 2013, the Economics and Policy Planning Division of SME Corp. Malaysia approved a revised definition for SMEs. The updated definition is as stated below:

1. Manufacturing: Sales turnover below RM50 million OR full-time employees below 200 workers.
2. Services and other sectors: Sales turnover must not exceed RM20 million OR the number of full-time employees must not exceed 75 people.

ICT from Small and Medium Sized Enterprise

Malaysia's government and private sector are currently engaged in a comprehensive digital transformation across the entire country. The ICT sectors encompass the fields of tailored software development, e-commerce consulting, and security consulting. SMEs in the ICT sector offer services such as data storage, data processing, reporting, monitoring, as well as business and decision support. These corporations employ experts that construct, evaluate, install, fix, and uphold hardware and software within organisations. Large enterprises typically have internal IT departments, whereas smaller organisations frequently engage freelance IT professionals to handle specific assignments.

The growth potential for SMEs can be found in the fields of ICT, logistical services, distributive trade, as well as professional and business services. In order to promote the growth of SMEs in the field of ICT, several measures are implemented. These measures encompass providing financial support for the first stages of business establishment and development, as well as offering guidance and support in terms of business growth and mentorship. Areas such as knowledge-intensive organisations and specialised services like customised software development, e-commerce consulting, and security consulting show great potential.

The ICT sector accounted for 19.1% of the country's Gross Domestic Product (GDP) in 2019, and it is projected to increase to 22.6% by 2025. SMEs in the education industry offer cloud services that allow users to access online course materials at any time, day or night. Given the projected growth of the ICT industry, it is imperative to prioritise the maintenance of SME performance in order to ensure optimal efficiency and effectiveness. This research intends to examine the characteristics of corporate entrepreneurship that can enable ICT SMEs to achieve business sustainability.

RELATED WORKS

In the modern business environment, the relevance of company sustainability is of the utmost importance, serving as a fundamental catalyst for the maintenance of social and economic stability. According to Ab Rashid et al. (2023), this is especially true in the ICT industry in Malaysia, where the implementation of ICT in business processes significantly enhances socioeconomic sustainability for a wide range of income levels. Business practices that prioritise social equality, environmental responsibility, and

economic viability are vital for supporting sustainable growth and adapting to technological advancements. This is because sustainable business practices prioritise these three characteristics. For instance, Malaysia's implementation of cutting-edge technology such as Agricultural Revolution 4.0 (AR4.0) demonstrates how sustainable business practices may simultaneously address critical problems regarding sustainability and increase the performance of corporations (Aris et al., 2023).

According to Mohammed Hasbollah et al. (2023), the incorporation of solar photovoltaic (PV) systems into SMEs is a demonstration of how sustainable energy solutions can strengthen a company's brand and generate long-term financial benefits. This, in turn, reinforces the significance of sustainability in business strategy. The examples shown here illustrate the significant part that sustainability plays in fostering social well-being, preserving the environment, and ensuring economic resilience in the business world.

Based on the findings of Ha Minh Vu et al. (2016), in order for businesses to be called sustainable, they need to take into consideration the impact that their operations, services, and products have not only on shareholders and consumers, but also on workers, communities, and the environment. According to Rana (2019) and Sartori et al. (2014), the three primary goals of the sustainability of a corporation are economic performance, environmental performance, and social performance. Indeed, the idea of business sustainability encompasses a wide range of situations and may be applied to a variety of different types of businesses. Sustainability provides an environment that encourages innovation and has the potential to increase an organization's degree of competitiveness. It addresses a wide range of issues, including economic viability, social responsibility, innovation, and competitiveness. Both large corporations and SMEs are required to adhere to the fundamental ideals of social responsibility, environmental stewardship, and ethical business practices. This is despite the fact that there are disparities in the opportunities and problems associated with sustainability.

Corporate Entrepreneurship

The authors Yasmin, Zeytonli, Houghton, and Hardway (2023) define corporate entrepreneurship (CE) as an essential organisational process that contributes to the continued existence of a company and improves the performance of the organisation as a whole. The significance of corporate entrepreneurship (CE) in promoting innovation and strategic renewal in well-established organisations is gaining more and more recognition as time goes on. According to the findings of current research (Hiebl & Pielsticker, 2023), it is essential to find a middle ground between the needs of innovation and those of conventional operations. Developing the competencies of staff members and fostering an environment that is conducive to innovation and intrapreneurship are two of the most important roles that CE performs in small and medium-sized organisations (Padi, Ansah, & Mahmoud, 2022). In order for businesses

to maintain their flexibility and competitiveness in markets that are always shifting, they need to implement this strategic approach.

The concept of "corporate entrepreneurship" refers to the practice of stimulating strategy renewal and innovation within well-established businesses with the goal of fostering internal innovation. The process comprises initiating and supervising projects that are designed to increase the growth and competitiveness of an organisation. According to Hiebl and Pielsticker (2023), CE is differentiated by the fact that it places an emphasis on both making use of existing resources and studying possibilities that have not yet been explored. A fresh study suggests that politically connected state-owned firms may profit from this idea by stimulating green innovation (Zhang, Zhou, & Tian, 2022). This idea is always evolving, and fresh research indicates that this idea may be beneficial.

Innovativeness

In the context of corporate entrepreneurship, innovation is described as the introduction and implementation of fresh ideas, procedures, or products on a business level. According to Hiebl and Pielsticker (2023), they are crucial for adapting to changes in the market and in technical breakthroughs, which increases a company's potential to adapt and thrive in markets that are always shifting. This strategy, which combines innovative thinking with real-world application to deliver new responses to market issues, is essential for promoting growth and being relevant in a firm environment that is always changing (Hiebl & Pielsticker, 2023). This method involves combining innovative thinking with real-world application.

According to Hiebl and Pielsticker (2023), it is the foundation of a company's strategic development, since it ensures that innovative solutions are able to handle market challenges in an effective and long-lasting manner. Innovativeness is a critical component of business sustainability, as stated by Suki et al. (2022). This is because it enables businesses to adjust to changes in the market and environment while still maintaining their competitive edge and profitability.

Hiebl and Pielsticker (2023) define innovativeness in corporate entrepreneurship as the introduction and execution of new ideas, processes, or products. To recap, this definition describes the concept of innovativeness. When it comes to adapting to shifting market conditions and enhancing a company's capacity for expansion, this approach is absolutely necessary. According to Suki et al. (2022), it is of utmost importance to the concept of corporate sustainability since it enables organisations to easily adjust to alterations in the market and the environment while still maintaining their profitability and competitiveness. According to research conducted by Rabiatul Adawiyah Mohd Ariffin et al. (2022), business entrepreneurship in Malaysia is strongly dependent on innovation in order to integrate social and economic objectives for the purpose of long-term, sustainable development and establishment.

Proactiveness

When it comes to corporate entrepreneurship, being proactive implies anticipating and reacting to changes in the market, as well as employing a forward-thinking strategy in order to capture opportunities before competitors (Medina Molina et al., 2022). It requires organisations to behave in a proactive, change-oriented, and self-initiated manner in order to stay ahead of advancements in the market and to capitalize on opportunities that are just developing (Medina Molina et al., 2022). According to Medina Molina et al. (2022), this aspect of business is characterised by a strategic approach, in which organisations actively seek out and seize new opportunities, hence maintaining a competitive advantage over competing businesses and trends in the market.

Being proactive is crucial for corporate entrepreneurs in Malaysia, particularly in sectors such as accountancy and higher education, where staying competitive requires anticipating and adjusting to developments (Hooi Kun Lee & Gary Tan Peng Liang, 2021). The Malaysian corporate sector is committed to innovative and forward-thinking entrepreneurship, and the emphasis on proactivity is a reflection of that (Hooi Kun Lee & Gary Tan Peng Liang, 2021). This will help firms adapt to changing market conditions and maintain a competitive advantage. According to Hooi Kun Lee and Gary Tan Peng Liang (2021), this approach is vital for thriving in the Malaysian business environment since it shows a commitment to proactive and innovative corporate entrepreneurial approaches.

Competitiveness

According to Golubović and Janković (2019), what is meant by the term "competitiveness" in the context of corporate entrepreneurship is the ability of a company to outperform its rivals through strategic resource allocation, market positioning, as well as innovation and adaptation in response to changing market conditions. As stated by Golubović and Janković (2019), it involves the strategic utilisation of the company's resources, which encompass its assets, competencies, and special resources, in order to achieve a competitive advantage and maintain a prominent position within the sector. This thought is vital for leading and adapting to changing market conditions, as stated by Golubović and Janković (2019). Ensuring long-term success and market supremacy is possible through the implementation of this notion.

To provide a concise explanation, corporate entrepreneurial competitiveness refers to the ability of a company to outperform its rivals through strategic resource allocation and market positioning, as stated by Golubović and Janković (2019). In order to assist businesses in gaining market share and becoming financially robust, it is vital for firms to have sustainable growth (Porancea-Răulea Andreea Simina, 2022). For corporate entrepreneurship in Malaysia, increasing competitiveness is crucial,

particularly in industries where national policies and the dynamics of the global market have an impact (Juanita Elias, 2015). This is especially true in fields where the global market is dynamic.

Risk Taking

Risk refers to the probability of encountering failure, loss, or other undesirable consequences while participating in a specific activity or endeavour (Rahaman et al., 2021). Corporate entrepreneurship involves the act of investing money in projects that have uncertain outcomes, where making intelligent decisions could result in significant profits despite potential risks (Astrini et al., 2020). This component is crucial for firms who aim to innovate and venture into new markets or develop new products. It entails embracing ambiguity and taking bold steps that could lead to significant benefits (Astrini et al., 2020). The process by which opportunity and progress are generated is referred to as the means (Rahaman et al., 2021). Astrini et al. (2020) demonstrate that a company's preparedness to confront uncertainty and make strategic decisions can lead to significant growth and market expansion.

According to Arpit Goyal and U. Mishra, the act of taking risks is essential for the long-term success of businesses. This is because it fosters a culture of innovation and exploration, allowing businesses to achieve significant growth and gain a competitive advantage. Companies can enhance their ability to innovate, explore untapped markets, and achieve a competitive advantage by strategically undertaking calculated risks. These measures are crucial for achieving long-term success and adaptation in a rapidly evolving corporate environment (Arpit Goyal & U. Mishra). Arpit Goyal and U. Mishra assert that this technique is crucial for achieving long-term success, adapting to changes, and effectively managing the intricacies of the modern corporate landscape.

Risk-taking is a crucial element of corporate entrepreneurship in Malaysia, especially in sectors like Islamic banking and politically affiliated enterprises, where carefully considered risks can lead to substantial growth and long-term sustainability (Fakhrul Anwar Zaino et al.). The importance of embracing risks in the corporate landscape of Malaysia, with the aim of achieving resilience and long-term prosperity, is seen in the strategic risk choices made within these industries (Fakhrul Anwar Zaino et al.). This emphasises the essentiality of undertaking risks for the sustained profitability, resilience, and capacity of Malaysian enterprises to uphold a competitive edge in the international market (Fakhrul Anwar Zaino et al.).

Autonomy

Autonomy, extensively examined across various disciplines, pertains to an agent's capacity to act in accordance with its own volition. According to Ezenkwu and Starkey (2019), machine autonomy refers to the ability of artificial systems to operate independently, with an emphasis on distinguishing between low-level and high-level

autonomous characteristics. Brańka (2018) emphasises the disputed and intricate nature of autonomy in a geographical context. Wertenbroch et al. (2020) enhance the concept of consumer choice by examining consumer autonomy, emphasising its significance, and differentiating between real and perceived autonomy.

Malaysian workplaces provide unique viewpoints on the implementation of autonomy. Gu et al. (2021) analyse autonomy support in Malaysia from the perspective of self-determination theory and discover a favourable correlation between autonomy support and the well-being of interns. SheeMun et al. (n.d.) highlight job autonomy as a crucial factor for employee engagement in Malaysia's private sector. Hashim et al. (2017) illustrate the broader utilisation of autonomy in many sectors by examining the positive impact of work autonomy and organisational support on the performance of soldiers in the Malaysian army.

METHODOLOGY

The methodology of this inquiry is based on an interpretive paradigm, focussing specifically on the constructed realities of corporate entrepreneurship in connection to the sustainability activities of Malaysian ICT SMEs. The study will employ a multiple-case study approach, which is a qualitative research methodology. Upon initial examination, it may appear that this research is capable of quantifying the connections and outcomes of entrepreneurial activities through the use of a positivist methodology.

In this investigation of corporate entrepreneurial characteristics and sustainability in small and medium-sized enterprises (SMEs) in the information and communication technology (ICT) sector in Malaysia, pragmatism highlights the importance of acquiring knowledge that can directly impact practical application and policy-making. The study adopts a pragmatic approach to produce insights that are meaningful in both theory and practice for stakeholders in the ICT sector and beyond.

To investigate the qualities and elements that contribute to the sustainability of Malaysia's information and communications technology business, this study will integrate realism with other research paradigms. Through the use of interpretivism, this study investigates how persons working in businesses perceive and put into practice initiatives related to entrepreneurship and sustainability.

The interpretivist methodology of the study captures the subjective reality of corporate entrepreneurship and sustainability practices, thereby providing insights into how small and SMEs in the information and communications technology industry perceive and comprehend these concepts. In order to answer the questions posed by the study, the research design directs the process of data gathering, measurement, and analysis. In order to evaluate SMEs in the information and communications technology industry, this project will use a variety of case studies.

DISCUSSION

The ICT business in Malaysia, which is primarily dependent on SMEs, is essential to the country's efforts to achieve digital transformation and economic growth. SMEs in this sector offer essential services such as data storage, processing, monitoring, and decision support. They do this by utilising their expertise to construct, test, install, repair, and maintain hardware and software. Because of this adaptability, larger organisations are able to hire in-house information technology teams, whereas smaller enterprises might benefit from employing freelance IT specialists for specialised jobs on their own.

A number of initiatives, including seed and start-up funding, as well as company development and mentorship services, are currently being put into place in order to further drive this growth. These efforts have the goal of fostering the development of all industries, including SMEs and ICT technopreneurs.

SMEs in the ICT industry can establish a strong basis for long-term sustainability and continued success by incorporating these factors into their business operations. This strategic approach not only guarantees the continued existence of small and medium-sized enterprises (SMEs), but also places them in a favourable position for expansion and dominance in the ever-changing digital economy.

CONCLUSION

In conclusion, in order to guarantee the long-term viability of SMEs in the ICT industry, it is necessary to take into consideration and include a number of important criteria into business operations. In order for business owners to be able to formulate effective business plans that support the sustainability and growth of their companies beyond five years and beyond, they will need to have a solid understanding of the key factors that contribute to long-term viability, such as innovation, proactive, skilled workforce, and financial management, as well as sustainable business practices.

REFERENCE

- Ambad, S. N. A., Andrew, J. V., & Awang Amit, D. H. D. (2020). Growth challenges of SMEs: empirical evidence in Sabah, Malaysia / Sylvia Nabila Azwa Ambad, Jasmine Vivienne Andrew and Dayang Haryani Diana Awang Amit. *ASEAN Entrepreneurial Journal*, 6(1), 8–14.
- Aris, N.F.M., Abdul Fatah, F., Zailani, S.H.M., Saili, A., & Adnan, H. (2023). The relationship between the adoption of agricultural revolution 4.0 technology and business performance and sustainability in agro-food supply chain in Malaysia: a conceptual paper. *Future of Food: Journal on Food, Agriculture and Society*, 7(S2), 19. [https://dx.doi.org/10.26656/fr.2017.7\(s2\).19](https://dx.doi.org/10.26656/fr.2017.7(s2).19)

- Arpit Goyal & U. Mishra. (n.d.). Impact Of Entrepreneurial Marketing On Business Sustainability: A Multi-dimensional Approach. Retrieved from <https://www.researchgate.net/publication/34883121>
- Astrini, N., Rakhmawati, T., Sumaedi, S., Bakti, I., Yarmen, M., & Damayanti, S. (2020). Innovativeness, Proactiveness, and Risk-taking: Corporate Entrepreneurship of Indonesian SMEs. *IOP Conference Series: Materials Science and Engineering*, 722(1), 012037. <https://doi.org/10.1088/1757-899X/722/1/012037>
- Buyong, S., Syed Marzuki, S. Z., Junid, J., & Abdul Kadir, M. A. B. (2021). Eco Business Initiatives among Malaysian SME Green Technology Companies. <https://doi.org/10.21834/ebpj.v6i17.2827>
- Brańka, T. (2018). Content and scope of the concept of autonomy: definition challenges. Accessed online.
- Fakhrul Anwar Zaino, Dr.Wan Norhayate Wan Daud, Z. Abdullah, & M. Yaacob. (n.d.). Social Entrepreneurship Via Corporate Waqf: A Case of Islamic Chamber of Commerce (ICC) in Malaysia. Retrieved from <https://www.researchgate.net/publication/338803620>
- Golubović, M., & Janković, G. (2019). Corporate entrepreneurship as a factor of competitiveness of companies. *Ekonomski Izazovi*, 8(16), 100-110. <https://doi.org/10.5937/ekoizazov1916100g>
- Gu, M., Liu, L., & Bolt, E. E. T. (2021). Does autonomy support matter for intern well-being in Malaysia? A self-determination theory approach. *Asia Pacific Journal of Business Administration*. <https://dx.doi.org/10.1108/apjba-02-2021-0054>
- Hashim, S., Roslan, N. A., & Zaidel, N. (2017). The influence of pay satisfaction, job autonomy and organization support on the performance among Malaysian army. Accessed online.
- Hiebl, M. R. W., & Pielsticker, D. I. (2023). Automation, organizational ambidexterity and the stability of employee relations: new tensions arising between corporate entrepreneurship, innovation management and stakeholder management. *Journal of Technology Transfer*, 48, 1-22. <https://dx.doi.org/10.1007/s10961-022-09987-1>
- Hooi Kun Lee & Gary Tan Peng Liang. (2021). The Internal Circumstances that Encourage Corporate Entrepreneurship in the Accounting Profession in the Northern Region of Malaysia. *Journal of Management and Training for Industries*, 2(4), 1-15. <https://doi.org/10.37231/jmtp.2021.2.4.158>
- Medina Molina, C., Ribeiro Soriano, D. E., & Blanco González-Tejero, C. (2022). Multi-level corporate entrepreneurship in SMEs: an intra-metropolitan analysis. *Review of Managerial Science*, 16(8), 2673-2690. <https://doi.org/10.1007/s11846-022-00575-z>

- Mohamad Hsbollah, H., Hassan, H., & Mohamad, R. (2023). The Impact of Solar Photovoltaic (PV) Adoption on Corporate Image and Business Sustainability in Malaysian Small and Medium Enterprises (SMEs). *Applied Science and Engineering Technology*, 31(1), 334-354. <https://dx.doi.org/10.37934/araset.31.1.334354>
- Padi, A., Ansah, W. O., & Mahmoud, M. (2022). Corporate entrepreneurship and employees' competencies: Do employees' perceived feasibility and desirability matter? *Cogent Business & Management*, 9(1), 2102129. <https://dx.doi.org/10.1080/23311975.2022.2102129>
- Prasanna, R., Jayasundara, J. M. S. B., Naradda Gamage, S. K., Ekanayake, E. M. S., Rajapakshe, P. S. K., & Abeyrathne, G. A. K. N. J. (2019). Sustainability of SMEs in the Competition: A Systemic Review on Technological Challenges and SME Performance. *Journal of Open Innovation; Technology Market, and Complexity*, 5(4), 100. doi:10.3390/joitmc5040100
- Porancea-Răulea Andreea Simina. (2022). The Importance of Sustainability for University Competitiveness. *Studia Universitatis Babeş-Bolyai Oeconomica*, 67(1), 5-20. <https://doi.org/10.2478/sbe-2022-0013>.
- Rabiatul Adawiyah Mohd Ariffin, Zuhairah Ariff Abd Ghadas, & M. Radzi. (2022). The Development for Social Entrepreneurship Innovation: An Extension Tax Theory of Public Good for Social Enterprise in Malaysia. *Journal of Humanities, Language, Culture and Business*, 4(2), 205-216. <https://doi.org/10.37534/bp.jhssr.2022.v4.n2.id1157.p205>
- Rahaman, M. A., Luna, K. F., Ping, Z. L., Islam, M. S., & Karim, M. M. (2021). Do Risk-Taking, Innovativeness, and Proactivity Affect Business Performance of SMEs? A Case Study in Bangladesh. *Journal of Asian Finance*, 8(5), 689–695. <https://doi.org/10.13106/jafeb.2021.vol8.no5.0689>
- Rana, S. (2019). Sustainability in Business: Some Research Perspectives. *FIIB Business Review*, 8(2), 77-78. <https://doi.org/10.1177/2319714519854232>
- Radzi, A. I. N., & Jasni, N. S. (2022). Small and Medium-Sized Enterprises (SMEs) Advancing Business Sustainability Toward SDGs: A New Force Driving Positive Change. <https://doi.org/10.6007/ijarafms/v12-i3/14917>
- Sartori, Simone & Latrónico, Fernanda & Campos, Lucila. (2014). Sustainability and sustainable development: A taxonomy in the field of literature. *Ambiente & sociedade*. XVII. 1-20. 10.1590/1809-44220003491.
- SheeMun, Y., Suhaimi, M. N., Abdullah, S., Rahman, S. A., & Mat, N. (n.d.). Employee Engagement: A Study from the Private Sector in Malaysia. Accessed online.

- Shukor, R., Mooi, W., & Ahmad, M. (2022). Small and medium enterprises' business sustainability based on the industry 4.0 internet of things adoption: A Malaysian Bumiputera case study. <https://doi.org/10.5937/sjm17-35505>
- Suki, N., Mohd Suki, N., Sharif, A., Afshan, S., & Rexhepi, G. (2022). Importance of green innovation for business sustainability: Identifying the key role of green intellectual capital and green SCM. *Business Strategy and the Environment*, 31(6), 2589-2604. <https://doi.org/10.1002/bse.3204>
- Wahab, N. Y. A., Mohamad, M., Yusuff, Y. Z., & Musa, R. (2020). The Importance of ICT Adoption in Manufacturing Sector: An Empirical Evidence on SME Business Performance.
- Wertenbroch, K., Schrift, R. Y., Alba, J., Barasch, A., Bhattacharjee, A., Giesler, M., Knobe, J., Lehmann, D., Matz, S., Nave, G., Parker, J. R., Puntoni, S., Zheng, Y., & Zwebnner, Y. (2020). Autonomy in consumer choice. *Marketing Letters*. <https://dx.doi.org/10.1007/s11002-020-09521-z>
- Yasmin, M., Zeytonli, A., Houghton, J. D., & Hardway, L. (2023). LMX and a perceived supportive environment for corporate entrepreneurship: the mediating role of psychological empowerment. *Asia Pacific Journal of Innovation and Entrepreneurship*. <https://dx.doi.org/10.1108/apjie-07-2023-0136>
- Zhang, C., Zhou, B., & Tian, X. (2022). Political connections and green innovation: The role of a corporate entrepreneurship strategy in state-owned enterprises. *Journal of Business Research*, 139, 1052-1063. <https://dx.doi.org/10.1016/j.jbusres.2022.03.084>

FACTORS AFFECTING THE TEACHING PERFORMANCE OF MANDARIN LECTURERS IN MALAYSIAN LOCAL UNIVERSITIES: A QUANTITATIVE STUDY

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Abstract

The teaching performance of university lecturers is crucial for ensuring their professional success and the overall quality of education delivered. However, some studies have raised concerns about the performance of Mandarin lecturers. This study aims to address these concerns by examining several key factors to gain a deeper understanding of the challenges faced by Mandarin lecturers. The Job Demands-Resources (JDR) theory was utilised to develop a model for investigating these issues. A cross-sectional study design was employed, beginning with a pilot study that collected 36 responses. These responses were subjected to exploratory factor analysis (EFA) and Cronbach's alpha using SPSS to ensure the validity, reliability, and feasibility of the questionnaire. The actual study involved distributing a Google Forms questionnaire, resulting in 116 valid responses out of 128 distributed. The data were analysed using descriptive statistics, Pearson's correlation analysis, and multiple regression analysis. The results indicated that four factors—leadership style, job stress, workload, and working environment—significantly and positively influence the teaching performance of Mandarin lecturers. The study suggests that universities should provide a supportive environment and effective leadership to enhance the performance of Mandarin lecturers. These findings are intended to guide relevant stakeholders, including university administrators, educators, and policymakers, in taking the necessary steps to improve the performance and well-being of Mandarin lecturers, ultimately ensuring they can deliver high-quality education to their students. By addressing these factors, universities can implement constructive strategies to improve Mandarin lecturers' performance, contributing to the overall success of Mandarin language programmes in Malaysian universities.

Keywords: *Teaching Performance, Mandarin, Lecturers, Universities and Quantitative*

INTRODUCTION

Given China's rapid economic growth and increasing political influence, the importance of learning Mandarin has surged globally. In response, the Malaysian government has implemented Mandarin language courses and actively promotes the learning of foreign languages, particularly Mandarin. This strategic initiative aims to equip students with the language skills necessary to engage with China's expanding

global influence. Consequently, the teaching performance of Mandarin lecturers has become increasingly significant, as their teaching effectiveness directly influences the success of these language programs and the broader objective of fostering strong educational and economic ties with China.

Teaching performance is defined as the effectiveness with which educators deliver instruction, engage students, and contribute to their academic success. It encompasses various aspects, including the ability to convey knowledge, manage the classroom environment, assess student learning, and adapt teaching methods to meet diverse student needs (Darling-Hammond et al., 2020; Kember & McNaught, 2007; Shulman, 2022). In the context of Mandarin lecturers, their performance is particularly significant due to the growing importance of Mandarin in the global landscape. The effectiveness of Mandarin lecturers has a profound impact on student learning and achievement. Effective teaching practices are crucial for fostering student engagement, promoting critical thinking, and ensuring that students reach their full academic potential. High teaching performance contributes to a positive learning environment where students feel supported and motivated to succeed (Hattie, 2009; Kyriakides et al., 2009; Wang et al., 1993). This makes the role performance of Mandarin lecturers vital, as their performance not only affects individual student outcomes but also plays a key role in the broader educational and cultural exchange efforts between Malaysia and China.

In this context, Mandarin is recognized as a significant course or program, with improvements in the performance of Mandarin lecturers noted in previous studies (Hoe et al., 2017; Lim & Goh, 2017). However, as observed by Hoe et al. (2017), several challenges continue to hinder these lecturers' performance, largely due to the Mandarin curriculum not being fully established or standardized across institutions. This lack of cohesion in the course structure presents additional difficulties for Mandarin lecturers. Beyond the typical teaching challenges, such as managing diverse student needs and maintaining engagement, Mandarin lecturers must also contend with the complexities of an underdeveloped curriculum. In essence, these educators face not only the inherent challenges of teaching but also the added burden of clerical tasks, including dealing with inconsistent syllabi, insufficient teaching materials, inadequate technological support, an excessive documentation workload, and additional teaching hours required to manage large classes (Abdul Rahman et al., 2022; Chong & Tee, 2022). Despite this, previous studies by English scholars have yielded mixed findings, suggesting that the impact of these challenges may vary. This underscores the need for a focused study on Mandarin lecturers to investigate the factors influencing their performance. Identifying these factors could fill existing gaps in both literature and practice, ultimately ensuring the successful implementation of Mandarin programs and the overall quality of language education.

To address this challenge, it is urgent to conduct this study to fill significant gaps in understanding the specific challenges faced by Mandarin lecturers and to improve their teaching performance. Thus, the outcomes of this study will be critical for guiding policy decisions and institutional support mechanisms, ultimately

fostering a more effective and sustainable teaching environment to ensure the high performance of Mandarin lecturers.

LITERATURE REVIEW

Teaching Performance

Teaching performance refers to the effectiveness with which educators deliver instruction, manage classroom environments, engage students, and facilitate academic success (Goe et al., 2008; Fang & Warschauer, 2004; Tsui, 2003). It encompasses a range of competencies, including the ability to convey subject matter clearly, assess and support student learning, adapt teaching strategies to diverse needs, and maintain a positive, productive learning atmosphere (Darling-Hammond et al., 2020; Shulman, 2022). High teaching performance is essential because it directly impacts student outcomes, fostering not only academic achievement but also critical thinking, motivation, and long-term educational success (Coe et al., 2014; Hattie, 2009; Kyriakides et al., 2009; Tucker, 2005).

The importance of teaching performance is underscored by its influence on student engagement and learning. Effective teaching helps create a supportive learning environment where students feel motivated and confident in their abilities, which is crucial for their academic and personal development (Danielson, 2013; Stronge, 2018; Wang et al., 1993). Research has shown that teachers who demonstrate high levels of teaching performance contribute significantly to students' overall success, not only in terms of academic grades but also in fostering a positive attitude towards learning (Marzano et al., 2001; Wang et al., 1993; Stronge, 2018).

In the context of Mandarin teaching, performance takes on added significance due to the unique challenges associated with language instruction. Mandarin, being a tonal language with complex characters, requires specialized teaching strategies that are both engaging and effective in helping students overcome the inherent difficulties of learning the language (Abdul Rahman et al., 2022; Chong & Tee, 2022; Everson, 2009; Richards & Rodgers, 2014; Sun, 2006). The effectiveness of Mandarin teachers is crucial in this regard, as their ability to deliver instruction that is both clear and culturally relevant directly impacts students' proficiency and their motivation to continue learning the language (Hoe et al., 2017; Lim & Goh, 2017). Therefore, the teaching performance of Mandarin lecturers is a critical factor in the success of Mandarin language programs, particularly in non-native contexts where students may face additional barriers to learning.

Leadership Style

Basically, leadership style can be defined as the approach and behavior that a leader adopts to guide, inspire, and manage a group of people toward achieving specific goals (Avolio & Bass, 2004; Northouse, 2018; Robinson et al., 2008; Yukl, 2013). In a university setting, leadership style is crucial as it directly influences the institution's

culture, the effectiveness of teaching and learning, faculty development, and the overall academic environment (Bryman, 2007; Goleman, 2000). Effective leadership in universities fosters an environment that encourages academic excellence, innovation, and collaboration, which are essential for the success of both students and faculty. Leaders in higher education, such as deans, department heads, and other administrators, play a critical role in setting the vision and direction of the institution, providing support and resources, and creating a conducive atmosphere for academic and personal growth (Bass & Riggio, 2006; Kouzes & Posner, 2017).

According to Leithwood and Jantzi (2006) and Shatzer et al. (2014), the leadership style adopted by university leaders can significantly influence the teaching performance of lecturers. This assertion is further supported by studies conducted by Robinson et al. (2008) and Yildirim and Arastaman (2016), which highlight how transformational leadership, characterized by motivation, inspiration, and the fostering of a positive organizational culture—can lead to higher levels of job satisfaction and commitment among lecturers. This, in turn, enhances their teaching performance (Bass, 1985; Avolio & Bass, 2004). When lecturers feel supported, valued, and motivated by their leaders, they are more likely to engage deeply in their teaching, adopt innovative methods, and provide high-quality education to their students. Conversely, a leadership style that is overly authoritative or disengaged can lead to decreased motivation, increased burnout, and ultimately, a decline in teaching performance (Northouse, 2018).

In the specific context of Mandarin lecturers in today's educational landscape, leadership style plays a critical role in their teaching performance. Mandarin, being a complex and challenging language to teach, requires a supportive and empowering leadership style that encourages lecturers to be creative and adaptive in their teaching methods (Hoe et al., 2017, Yildirim & Arastaman, 2016). Given the increasing demand for Mandarin proficiency due to China's growing global influence, Mandarin lecturers face additional pressures and challenges, such as managing large classes with students of varying proficiency levels and developing teaching materials without standardized curricula (Hoe et al., 2017; Lim & Goh, 2017). A leadership style that is transformational, providing adequate resources, recognition, and opportunities for professional development, can help Mandarin lecturers overcome these challenges, leading to improved teaching performance and better student outcomes (Bass & Riggio, 2006; Leithwood et al., 2004; Cheng, 2019).

Work Load

Generally, workload refers to the amount of work assigned to an individual within a specific time frame. In the context of university settings, workload encompasses teaching hours, preparation time, administrative duties, research responsibilities, student advising, and other academic-related tasks (Barkhuizen et al., 2014; Houston et al., 2006; Shin & Jung, 2014). The management of workload is crucial as it directly impacts the overall performance and well-being of lecturers. Excessive workload can

lead to stress, burnout, and diminished teaching quality, while a well-balanced workload can enhance job satisfaction, teaching effectiveness, and student outcomes (Gillespie et al., 2001; Winefield et al., 2003).

In universities, the workload of lecturers plays a significant role in shaping their teaching performance. A balanced workload allows lecturers to dedicate sufficient time to class preparation, student interaction, and personal development, all of which are essential for effective teaching (Bell, 2017; Tight, 2010, Vardi, 2009). Conversely, an excessive workload can reduce the time and energy lecturers can devote to these activities, leading to a decline in teaching quality. Research has shown that lecturers with heavy workloads often experience fatigue, stress, and a lack of motivation, which negatively affect their teaching performance and student learning outcomes (Darabi et al., 2017; Houston et al., 2006). Workload management is therefore critical in ensuring that lecturers can maintain high standards of teaching and contribute to the academic success of their students (Houston et al., 2016).

Nowadays, workload challenges are particularly pronounced to Mandarin lecturer. Mandarin, being a complex language with tonal variations and intricate writing systems, requires significant effort in lesson preparation and student engagement (Gao & Zhao, 2020; Zhang, & Yang, 2018). Mandarin lecturers often have to manage large class sizes, diverse proficiency levels among students, and additional administrative duties, all of which contribute to an increased workload (Wang & Curdt-Christiansen, 2016). This heavy workload can lead to burnout, reduced teaching effectiveness, and lower job satisfaction. Moreover, the rising demand for Mandarin proficiency, driven by China's global influence, has placed additional pressure on Mandarin lecturers to deliver high-quality instruction (Zhao & Liu, 2020). In this context, the need for workload management is even more critical, as Mandarin lecturers must balance the demands of teaching with the need for continuous professional development and curriculum adaptation. Institutions must recognize these challenges and provide adequate support to ensure that Mandarin lecturers can effectively fulfill their roles without compromising their well-being (Liu & wang, 2019; Qiu & Tang, 2021).

Job Stress

Job stress in a university setting refers to the psychological and physical strain experienced by academic staff due to the demands and pressures associated with their roles. This stress can arise from various sources, including workload, administrative responsibilities, student interactions, and institutional expectations (Bell et al., 2012; Houston et al., 2006; Raj et al, 2016; Sang et al., 2013). In universities, where lecturers are expected to balance teaching, research, and service duties, job stress can significantly impact their well-being and job performance. According to Lazarus and Folkman (1984), stress is a result of the perceived imbalance between the demands placed on an individual and their ability to cope with those demands. In the academic context, excessive job stress can lead to burnout, reduced productivity, and decreased

job satisfaction, ultimately affecting the quality of education provided to students (Winefield et al., 2003).

High levels of job stress can negatively influence a lecturer's teaching performance. When lecturers are overwhelmed by stress, they may struggle to maintain the energy and enthusiasm necessary for effective teaching. This can result in less engaging lectures, lower-quality instruction, and a diminished ability to meet the diverse needs of students (Gmelch & Wilke, 2010; Kinman & Wray, 2013). Stress can also impair cognitive functioning, leading to difficulties in concentration, memory, and decision-making, all of which are crucial for effective teaching (Beilock & Carr, 2005; McEwen & Sapolsky, 1995; Sandi, 2013). Furthermore, stressed lecturers are more likely to experience burnout, which can manifest as emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment. This, in turn, can lead to higher absenteeism, lower student satisfaction, and a negative impact on the academic environment as a whole (Gillespie et al., 2001; Mark & Smith, 2012; Maslach & Leiter, 2016).

In the specific context of Mandarin lecturers, job stress is exacerbated by the unique challenges associated with teaching Mandarin, a complex and demanding language. Mandarin lecturers often face large class sizes, diverse student proficiency levels, and high expectations for language acquisition, which can contribute to increased stress levels (Hoe et al., 2017; Wang & Curdt-Christiansen, 2016). Additionally, the need to constantly adapt teaching methods to accommodate students with varying levels of Mandarin proficiency can add to the cognitive and emotional demands placed on these educators (Liu & Meng, 2022). The rising global demand for Mandarin language skills, driven by China's economic and political influence, further intensifies the pressure on these lecturers to deliver high-quality instruction (Zhao & Liu, 2020). If not properly managed, this stress can lead to burnout, negatively impacting their teaching performance and the overall effectiveness of Mandarin language programs in universities.

Working Environment

The working environment in a university context refers to the physical, psychological, and social conditions in which academic staff operate. This includes factors such as office space, access to resources, administrative support, colleague relationships, workload, and institutional culture (Baker & Salas, 2017; Kuvaas, 2006; Zhu & Cooper, 2016). A positive working environment is essential for fostering job satisfaction, productivity, and overall well-being among university staff (Awa & Awa, 2014; Barkhuizen et al, 2014; Gibson & McDaniel, 2016).

The working environment is critically important in a university setting as it directly impacts the performance, motivation, and retention of lecturers and academic staff. A supportive and resource-rich environment enables lecturers to perform their roles effectively, contributing to the overall quality of education (Johnson & Stevens, 2001; Roffey-Barentsen & Malthouse, 2013). Conversely, a negative working

environment, characterized by inadequate resources, poor communication, and high stress levels, can lead to job dissatisfaction, burnout, and turnover (Kinman & Jones, 2008; Gillespie et al., 2001). The working environment plays a pivotal role in influencing the teaching performance of lecturers. Factors such as institutional support, access to teaching resources, collaborative culture, and a conducive physical environment all contribute to the effectiveness of teaching. Lecturers who operate in supportive environments are more likely to be innovative, engage students effectively, and maintain high standards of teaching (Skaalvik & Skaalvik, 2011; Thapa et al., 2013). On the other hand, a stressful or unsupportive environment can hinder a lecturer's ability to deliver quality education, leading to decreased student engagement and poorer educational outcomes (Leithwood & Jantzi, 2006; Barkhuizen et al., 2014). In the specific context of Mandarin lecturers, the working environment is even more critical. Mandarin is a complex language that requires significant effort in lesson planning, teaching, and student engagement. Mandarin lecturers often face large class sizes, varying levels of student proficiency, and additional administrative duties, which can be exacerbated by a challenging working environment (Cheng & Zhang, 2018; Huang & Wang, 2019; Liu & Li, 2017; Zhao & Liu, 2020). A supportive working environment that includes access to adequate resources, professional development opportunities, and strong institutional support is crucial for Mandarin lecturers to perform effectively and manage the unique demands of teaching Mandarin in today's educational landscape (Wang & Curdt-Christiansen, 2016; Chen & Wright, 2017). Institutions that fail to provide these conditions may find that their Mandarin programs suffer from high turnover, burnout, and declining teaching quality.

Job Demands-Resources

The Job Demands-Resources (JDR) model is a well-established framework in organizational psychology that aims to explain how job characteristics affect employee well-being and performance. The model, developed by Demerouti et al. (2001), distinguishes between two core components: job demands and job resources.

1. **Job Demands:** These are the physical, psychological, or emotional aspects of a job that require sustained effort and are associated with certain physiological and psychological costs. Examples include high workload, time pressure, and emotional demands. High job demands can lead to stress and burnout if not properly managed (Demerouti et al., 2001).
2. **Job Resources:** These are the physical, psychological, social, or organizational aspects of a job that help employees achieve work goals, reduce job demands, or stimulate personal growth and development. Examples include support from colleagues, access to training, and a positive work environment. Adequate job resources can buffer the impact of high job demands and contribute to higher job engagement and performance (Bakker & Demerouti, 2007).

The JDR model is particularly suitable for studying Mandarin lecturers due to the unique challenges and demands associated with teaching this complex language.

Mandarin teaching involves considerable job demands such as large class sizes, diverse student proficiency levels, and extensive preparation time. These demands can lead to high stress levels and potential burnout if not adequately managed (Wang & Curdt-Christiansen, 2016; Zhu & Cooper, 2016). Mandarin lecturers also require specific job resources to effectively manage these demands. Resources such as institutional support, access to teaching materials, and a conducive working environment can significantly impact their teaching performance and job satisfaction (Huang & Wang, 2019; Zhao & Liu, 2020). By applying the JDR model, researchers can explore how these job demands and resources interact to influence Mandarin lecturers' performance and well-being.

In other words, the JDR model is uniquely fitting for this study because it allows for a comprehensive analysis of how both job demands and job resources affect Mandarin lecturers. This model helps in identifying critical factors that contribute to teaching performance and well-being, addressing the dual nature of job stressors and supports. It provides a structured approach to understanding the balance required for optimal performance and offers practical insights for enhancing the working conditions of Mandarin lecturers.

Conceptual Framework

Based on Figure 1, the independent variables include leadership style, work load, job stress and working environment, while the dependent variable is the teaching performance. Accordingly, this study proposes the following four hypotheses:

Hypothesis 1: Leadership style positively influence teaching performance.

Hypothesis 2: Work load positively influence teaching performance.

Hypothesis 3: Job stress positively influence teaching performance

Hypothesis 4: Working environment positively influence teaching performance

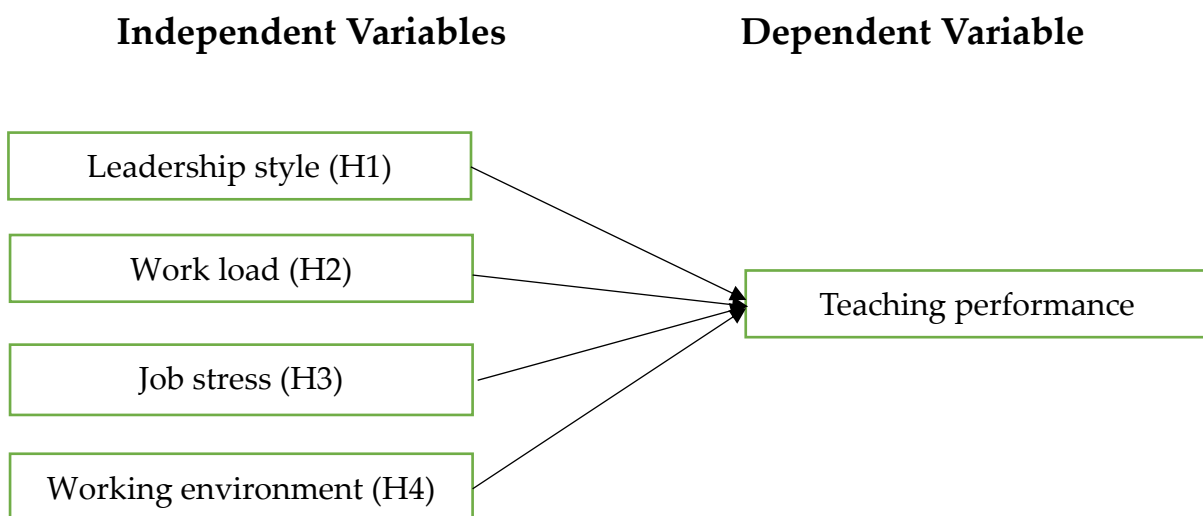


Figure 1: Conceptual framework of the study

METHODOLOGY

This study employed a quantitative approach using a survey method to collect data. The population comprised Mandarin teachers working in local universities in Malaysia, all of whom are permanent staff with over six years of teaching experience. To construct the questionnaire, several instruments from previous research were adapted. For leadership style, the study used instruments from Antonakis et al. (2003) and Kouzes (2017). Workload was measured using instruments from Lee & Klerk (2017) and Smith & Brown (2015). Job stress was assessed with tools from Kristensen et al. (2005) and LeBlanc & Kelloway (2002). The working environment was evaluated using instruments from Karasek et al. (1998) and Patterson et al. (2005), while teaching performance was measured with instruments from Marsh (1982) and Thompson et al. (2004). Modifications were made to these instruments to ensure relevance to the current study, and the content was verified by five experts from different universities to ensure content validity. Additionally, face validity was assessed by a group of retired Mandarin teachers. A pilot test was conducted to evaluate the validity, reliability, and feasibility of the questionnaire items (Awang, 2012; Bahkia et al., 2018; Hoque et al., 2018).

The questionnaire was organized into six sections: Part A covered the demographic profile (4 items); Part B addressed leadership style (7 items); Part C focused on workload (7 items); Part D explored job stress (7 items); Part E examined the working environment (7 items); and Part F assessed teaching performance (7 items). A five-point Likert scale was used, ranging from '1 - strongly disagree' to '5 - strongly agree,' to measure all variables. This scale was chosen for its balance between simplicity and the ability to capture variability in responses, making it user-friendly and improving data quality (Ghazali & Sufian, 2018).

Data analysis was performed using SPSS version 26, employing Pearson correlation and regression models to explore the relationships between variables and to assess the predictive power of the independent variables on teaching performance. The data collection process began with an email sent to department heads (HODs) to seek approval for the study. After approval, the researcher coordinated with course coordinators or program facilitators, holding a Zoom meeting to brief them on the study's objectives and to ensure confidentiality of the collected data. The Google Form questionnaire was then distributed by the HODs to the respondents. The researcher maintained contact with the coordinators to offer assistance as needed. Respondents were informed that they had approximately two weeks to complete the questionnaire (Creswell, 2014; McCoy & Theodoulou, 2016; Zikmund et al., 2013). Participation was voluntary, and the questionnaire was self-administered. Cluster sampling was used to select the study respondents.

Once data collection is complete, the researcher will begin by examining the dataset for missing values to ensure its completeness and reliability. Appropriate techniques, such as imputation or case deletion, will be applied based on the extent and nature of the missing data. Following this, the researcher will assess common

method variance (CMV) to verify that the observed variance is not mainly due to the measurement method itself, using approaches like Harman's single-factor test or the inclusion of a marker variable. Additionally, response bias will be evaluated by identifying patterns that may indicate biases. After thorough data cleaning and validation, the researcher will proceed with the analysis, ensuring that the results are both accurate and dependable (Awang, 2012; Bahkia et al., 2018)

DATA ANALYSIS AND RESULTS

Respondents' Demographic

In this study, the researcher distributed 128 surveys, of which 116 were returned as valid responses, resulting in an excellent response rate of 90% (Baruch & Holtom, 2008; Dillman et al., 2014; Groves & Peytcheva, 2008). The results revealed that a significantly higher proportion of female Mandarin teachers (87.1%) completed the questionnaire compared to male Mandarin teachers (12.9%). The age group with the highest participation was 41-50 years old, accounting for 61.3% of respondents, followed by those aged 31-40 years old (24.6%), and the lowest participation was from those aged 21-30 years old (5.5%). The vast majority of respondents were Chinese (97.5%), with the remaining 2.5% belonging to Malay. In terms of job tenure, most respondents had been working for 11-15 years (48%), followed by 6-10 years (31%), and 15 years and above (11.5%). Respondents came from sixteen different local universities as displayed in table below.

Table 1: Demographic profile of the respondents.

Demographic variables	Category	Frequency	Percentage (%)
Gender	Male	15	12.9
	Female	101	87.1
Age	21 – 30 years old	7	5.5
	31 – 40 years old	28	24.6
	41 – 50 years old	71	61.3
	51 – 60 years old	10	8.6
Race	Malay	3	2.5
	Chinese	113	97.5
	Indian	0	0
	Others	0	0
Job Tenure	1-5 years	11	9.5
	6-10 years	36	31.0
	11-15 years	56	48.0
	15 years and above	13	11.5
University	Universiti Malaya (UM)	5	4.3
	Universiti Putra Malaysia (UPM)	3	2.5
	Universiti Utara Malaysia (UUM)	3	2.5

Universiti Teknologi Malaysia (UTM)	2	1.7
Universiti Sains Malaysia (USM)	5	4.3
Universiti Malaysia Perlis (UNIMAP)	4	3.4
Universiti Perguruan Sultan Idris (UPSI)	4	3.4
Universiti Malaysia Kelantan (UMK)	4	3.4
Universiti Teknologi MARA	66	56.9
Universiti Sultan Zainal Abidin Malaysia	2	1.7
Universiti Tun Hussein Onn Malaysia	2	1.7
Universiti Kebangsaan Malaysia	4	3.4
Universiti Pahang Malaysia	5	4.3
Universiti Sabah Malaysia	4	3.4
Universiti Terengganu Malaysia	1	0.8
Universiti Teknikal Melaka Malaysia	1	0.8

Reliability

The reliability results presented in Table 2 indicate the Cronbach's alpha coefficients for leadership style, workload, job stress and working environment and teaching performance. All these variables achieved coefficients exceeding 0.70, which, according to Cortina (1993) and Sekaran and Bougie (2013), signifies good reliability and acceptable internal consistency.

Table 2: Cronbach's Alpha (α) values of all items

	Variables	Number of items	Cronbach's Alpha (α)
Independent	Leadership style	7	0.862
	Work load	7	0.816
	Job stress	7	0.831
	Working environment	7	0.811
Dependent	Teaching performance	7	0.856

Based on the table, the instruments used in this study demonstrate strong reliability, as indicated by Cronbach's Alpha values that exceed the minimum threshold of 0.7. This suggests that the instruments are both consistent and dependable for measuring the variables, thereby enhancing the validity of the results obtained from the data.

Correlation analysis

The correlation coefficient, denoted as "r," is a statistical measure used to evaluate the strength and direction of the linear relationship between two variables (Hair et al., 2012). In this study, the researcher employed correlation coefficient analysis to investigate the relationships between the independent variables: leadership style, workload, job stress, and working environment and the dependent variable, teaching performance. The findings of this analysis are detailed in Table 3. Correlation analysis is a statistical technique designed to determine whether a linear relationship exists

between two continuous variables. The correlation coefficient can range from -1 to +1, with positive values indicating a direct relationship and negative values reflecting an inverse relationship (Pallant, 2016). A coefficient value of zero suggests no linear relationship between the variables. The magnitude of the coefficient reveals the strength of the correlation: values closer to -1 or +1 signify a stronger relationship, whereas values near zero indicate a weaker or non-existent correlation (Pallant, 2016).

Table 3: Pearson correlation coefficient values of all variables

Pearson Correlation	All Variables				
	Leadership style	Work load	Job stress	Working environment	Teaching performance
Leadership style	1				
Work load	.683	1			
Job stress	.528	.523	1		
Working environment	.417	.596	.603	1	
Teaching performance	.516	.419	.376	.589	1

**Correlation is significant at the 0.01 level (1-tailed)

The correlation coefficient analysis results are detailed in the tables above. The findings affirm the validity of the measures for leadership style, workload, job stress, working environment, and teaching performance. As shown in Table 3, there are no negative correlations among the variables. Instead, the results reveal positive correlations between the independent variables and the dependent variable, teaching performance. Specifically, the analysis indicates that leadership style, workload, job stress, and working environment each have moderate correlations with teaching performance. According to Table 3, the working environment demonstrates the strongest correlation with teaching performance ($r = 0.589$), followed by leadership style ($r = 0.516$), workload ($r = 0.419$), and job stress, which shows the weakest correlation ($r = 0.376$).

Based on the results, H1, H2, H3 and H4 are accepted as each independent variable has a positive impact on burnout level. Table 4 shows the results of the hypotheses testing based on the correlation analysis.

Table 4: Hypothesis Testing

Hypothesis	Statement	Findings
H1	Work load has a positive effect on teaching performance	Accepted ($r=0.516$, $P < 0.01$)
H2	Work load has a positive effect on teaching performance	Accepted ($r=0.419$, $P < 0.01$)
H3	Job stress has a positive effect on teaching performance	Accepted ($r=0.376$, $P < 0.01$)
H4	Working environment has a positive effect on teaching performance	Accepted ($r=0.589$, $P < 0.01$)

Multiple Regression Analysis

Multiple regression analysis is a technique used to measure the relationship between dependent and independent variables. Table 5 presents the results of the analysis, examining how leadership style, work load, job stress and working environment give impact to teaching performance.

The analysis reveals that these factors collectively account for 49.8% of the variance in teaching performance, as indicated by an R^2 value of 0.498. This suggests that the model has a moderate explanatory power. The adjusted R^2 value, which serves as an alternative measure of model fit, is 0.494, closely aligning with the R^2 value. This proximity indicates that the model is well-fitted to the data. However, it also suggests that 50.2% of the variance in teaching performance among Mandarin teachers is influenced by other factors not included in the model. Additionally, the standard error of 0.45676 is relatively low, indicating that the model provides a reliable prediction of teaching performance of Mandarin lecturer.

According to Pallant (2016), the beta coefficient reflects the relative impact of a change in one standard deviation in each independent variable on the dependent variable. In this model, the highest beta coefficient is for working environment (0.556), followed by leadership style (0.409), with work load having the lowest coefficient (0.369). The t-test values for individual predictors indicate significance at the 0.000 level, as shown in Table 5. Therefore, it can be concluded that three factors: working environment (Beta = 0.556, $p < 0.05$), leadership style (Beta = 0.409, $p < 0.05$), and work load (Beta = 0.369, $p < 0.05$) are significant predictors of teaching performance of Mandarin lecturer, while institutional resources are not significant (Beta = -0.118, $p > 0.05$).

Table 5: Multiple regression analysis of independent variables and teaching performance

Model	Unstandardized	Std Error	standardized	t	Sig.
	coefficient		Beta		
	B		β		
1 (Constants)	1.619	.896		6.907	.000
Leadership style	.416	.623	.409	2.159	.000
Work load	.331	.528	.369	1.428	.003
Job stress	-.289	.612	-.118	-1.427	.219
Working environment	.502	.478	.556	2.846	.000

Note: Dependent Variable: teaching performance

Table 6

Model	R	R-square	Adjusted R-square	Std. error of the estimate
1	.668	.498	.494	.45676

Note: Predictors: (Constant) leadership style, work load, job stress and working environment

Table 7

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	13.306	4	4.349	34.786	.000 ^b
Residual	14.091	115	.127		
Total	27.397	119			

Based on Table 5, working environment ($\beta = 0.556$, $p = 0.000$), leadership style ($\beta = 0.409$, $p = 0.000$), and work load ($\beta = 0.369$, $p = 0.003$) are statistically significant in influencing the teaching performance of Mandarin teachers. In contrast, job stress ($\beta = -0.289$, $p = 0.118$) show an insignificant relationship with teaching performance. In this study, considering the β and p values, working environment have the highest β and the lowest p value, indicating that an increase in working environment by one-unit results in a 0.556 increase in teaching performance for Mandarin teachers,

assuming other independent variables remain constant. Therefore, it can be concluded that working environment are the most significant factors among the independent variables.

DISCUSSION

The main purpose of this study is to investigate the influence between leadership style, work load, job stress, working environment and teaching performance among Mandarin teacher in Malaysian local universities. Based on the empirical findings generated, the results indicated that all four variables (leadership style, work load, job stress and working environment) have positive and moderately correlation with teaching performance among Mandarin lecturer in Malaysian local universities. The highest score was the working environment (Pearson correlation coefficient = 0.589) and the lowest was job stress (Pearson correlation coefficient = 0.398). This result aligns with previous studies highlighting the significant role of working environment factors in enhancing the teaching performance of Mandarin lecturers. Particularly, a positive working environment has been shown to boost job satisfaction and performance among educators. Arnold and Feldman (2014) demonstrated that such environments contribute to higher levels of teacher engagement and commitment, directly impacting instructional quality. In the demanding context of Mandarin language teaching, where complexity is high, a conducive work environment is especially critical. Further supporting this, Smith and Brown (2015) emphasized that a supportive environment is crucial for maintaining lecturer morale and effectiveness. Their research found that access to necessary resources and a positive institutional culture significantly improves performance and job satisfaction among teachers. This is especially pertinent for Mandarin lecturers, who face the additional complexities of teaching a language with intricate tonal and writing systems, underlining the necessity for optimal work conditions to enhance educational outcomes. In other words, a supportive work environment enables Mandarin lecturers to effectively manage the inherent challenges of language instruction. This is particularly important when considering the demands of teaching Mandarin, which involves not just linguistic instruction but also cultural nuances that require sensitive and nuanced teaching approaches. Given the high stakes of Mandarin education in the global context, ensuring that lecturers operate in an environment that supports their professional growth and mental well-being is paramount.

At the same time, multiple regression was used as the tool for identifying the most prominent factors that affect Mandarin teachers' teaching performance. The results from the multiple regression analysis showed that working environment ($\beta = 0.556$, $p = 0.000$), leadership style ($\beta = 0.409$, $p = 0.000$), and work load ($\beta = 0.369$, $p = 0.003$) are significant factors influencing the teaching performance of Mandarin teachers, while job stress ($\beta = -0.118$) showed no significant relationship. Additionally, the R^2 value for the model was 0.498, indicating that 49.8% of the variance in teaching

performance is explained by the predictor variables. These findings are supported by previous studies that have demonstrated the significant role of leadership style, work load and working environment in contributing to teaching performance of Mandarin lecturer (Lee & Smith, 2015; Liu & Lee, 2016; Wang & Curdt-Christiansen, 2016b). Consequently, it is imperative for universities to optimize these areas to improve the effectiveness of their teaching staff. By fostering a supportive working environment, employing effective leadership styles, and efficiently managing workload, universities can significantly enhance teaching performance. This holistic approach not only benefits the lecturers but also improves the overall learning experience for students, leading to better educational outcomes.

CONCLUSION

In conclusion, this study identifies key factors influencing the teaching performance of Mandarin lecturers in Malaysian universities, highlighting the importance of leadership style, workload, job stress, and working environment. The findings emphasize the need for universities to address these factors holistically. Effective leadership, manageable workloads, supportive working environments, and strategies to mitigate job stress are essential for enhancing teaching performance. Implementing these measures will not only improve lecturer well-being but also contribute to higher-quality education and increased student satisfaction. University administrators and policymakers must act on these insights to support Mandarin lecturers effectively, thereby boosting their teaching performance and ensuring the success of Mandarin language programs. By addressing these issues, universities can enhance both the professional success of their lecturers and the overall effectiveness of their language programs.

RECOMMENDATION TO INCREASE THE TEACHING PERFORMANCE

Based on the empirical findings of this study, improving teaching performance in higher education institutions—particularly among Mandarin lecturers, requires a multifaceted approach that addresses several key factors. To achieve this, institutions should focus on enhancing leadership styles, managing workloads, mitigating job stress, and optimizing the working environment. Here are several recommendations to improve teaching performance:

First and foremost, institutions and universities should optimize the working environment to foster effective teaching. Ensuring that lecturers have access to modern teaching resources, comfortable office spaces, and adequate administrative support is essential. Creating collaborative spaces where lecturers can share ideas and resources helps build a sense of community and enhances teaching practices. Regularly soliciting feedback from lecturers about their working conditions and

making necessary improvements can contribute to a more conducive teaching environment.

Secondly, universities should enhance their leadership styles, as effective leadership is crucial for creating a supportive and motivating environment for lecturers. Leaders should adopt transformational leadership styles, which are characterized by inspiration, intellectual stimulation, and individualized consideration. Training programs can be implemented to develop these skills in academic leaders. Additionally, regular feedback sessions between leaders and lecturers can foster open communication, enabling leaders to address specific challenges and support professional growth. Research indicates that supportive leadership positively impacts job satisfaction and performance. By focusing on personalized mentorship and professional development, leaders can significantly enhance the teaching effectiveness of lecturers

Thirdly, managing workloads is essential for improving teaching performance in universities. Overburdened lecturers often struggle to maintain the quality of their instruction. Institutions should aim to distribute workloads more evenly, ensuring that lecturers have sufficient time for lesson planning, student interaction, and professional development. This can be achieved by hiring additional staff, re-evaluating administrative duties, and implementing policies that prevent excessive teaching loads. Encouraging a balance between teaching, research, and personal time is crucial for preventing burnout and maintaining high levels of teaching performance. Fourthly, mitigating job stress is another critical factor. High levels of stress can negatively impact both the well-being of lecturers and the quality of their teaching. Universities should provide access to mental health resources, such as counseling services and stress management workshops, to help lecturers cope with the demands of their roles. Additionally, creating a supportive work culture where lecturers feel valued and understood can significantly reduce stress levels. Regular check-ins with staff to discuss their concerns, along with offering flexibility in scheduling, can also help manage stress effectively.

Lastly, continuous professional development should be a priority for institutions aiming to enhance teaching performance. Offering opportunities for lecturers to attend workshops, conferences, and advanced training courses can keep them updated on the latest teaching methodologies and technological advancements. Providing support for research initiatives and encouraging participation in academic networks can also contribute to their professional growth and, consequently, their teaching effectiveness.

SUGGESTIONS FOR FUTURE RESEARCH

While this study is carefully designed, it does have some limitations that could be addressed in future research. One key area for improvement is the expansion of the sample size to include a wider variety of educational institutions. For instance, incorporating data from private universities, colleges, and international schools would allow for a more nuanced analysis of Mandarin teaching performance across different educational settings. Private institutions may employ different teaching methodologies, have varying resource availability, and cater to diverse student demographics compared to public universities. Including international schools, which often have a more global student body and different curricular frameworks, could further enhance the understanding of how Mandarin is taught and learned in different contexts.

At the same time, researchers should consider conducting comparative studies that examine teaching performance across different academic disciplines. By comparing the performance of Mandarin lecturers with that of teachers in other subjects, such as English, Mathematics, or Science, researchers can gain valuable insights into whether certain disciplines face unique challenges or are more prone to variations in teaching effectiveness. For instance, language subjects like Mandarin may require different pedagogical approaches compared to more quantitative subjects like Mathematics, where teaching might be more structured and formulaic. Additionally, these comparative studies could explore how subject-specific factors, such as curriculum complexity, student engagement levels, and the availability of teaching resources, impact performance. For example, researchers might find that Mandarin lecturers face distinct challenges related to cultural content delivery, student motivation, or the integration of multimedia resources, which could differ significantly from the challenges faced by teachers of other subjects. Understanding these differences could lead to the development of more tailored professional development programs that address the specific needs of lecturers in various disciplines.

Nevertheless, the role of technology has become increasingly significant, particularly following the Movement Control Order (MCO) implemented during the COVID-19 pandemic. The rapid shift to online learning has underscored the importance of digital tools in the educational landscape. Future studies should investigate how the integration of these digital tools specifically impacts Mandarin teaching performance in Malaysian higher education institutions. Research could explore the effectiveness of various digital platforms, such as language learning apps, virtual classrooms, and multimedia resources, in enhancing both the teaching and learning experiences. For instance, studies could examine whether the use of interactive tools, such as online quizzes, virtual language labs, or video-based learning, leads to improved student engagement, higher retention rates, and better language proficiency outcomes compared to traditional teaching methods.

In simpler terms, the topic of improving teaching performance should be extended to include diverse educational settings, comparisons across different subjects, and the exploration of digital tools. This broader approach will provide deeper insights into effective strategies, especially in adapting to digitalization in education.

REFERENCE

- Antonakis, J., Avolio, B. J., & Sivasubramaniam, N. (2003). Context and leadership: An examination of the nine-factor full-range leadership theory using the Multifactor Leadership Questionnaire. *The Leadership Quarterly*, 14(3), 261-295.
- Avolio, B. J., & Bass, B. M. (2004). *Multifactor leadership questionnaire: Manual and sampler set* (3rd ed.). Mind Garden, Inc.
- Awa, N. M., & Awa, W. A. (2014). Job satisfaction and job performance: The impact of working environment on employee performance. *International Journal of Human Resource Studies*, 4(2), 59-71.
- Awang, Z. (2012). *A handbook on SEM structural equation modelling: SEM using AMOS graphic* (5th ed.). Universiti Teknologi Mara Kelantan.
- Bahkia, A. S., Awang, Z., Rahman, A., Nawal, A., Rahlin, N. A., & Afthanorhan, A. (2022). An explicit investigation of occupational stress and safety behavior on the relationships between supportive leadership and safety compliance in sewerage industry. *Linguistics and Culture Review*, 6(S1), 146-168.
- Baker, D. P., & Salas, E. (2017). The science of teamwork: The impact of the work environment on team performance. *Team Performance Management*, 23(5/6), 278-289.
- Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, 61(8), 1139-1160.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Lawrence Erlbaum Associates.
- Beilock, S. L., & Carr, T. H. (2005). When high-powered people fail: Working memory and 'choking under pressure' in math. *Psychological Science*, 16(2), 101-105.

- Bell, A., & Bennett, M. (2017). The impact of flexible working on academic work/life balance and academic performance in UK higher education institutions. *Journal of Education Policy*, 32(2), 182-205.
- Bell, A. S., Rajendran, D., & Theiler, S. (2012). Job stress, wellbeing, work-life balance and work-life conflict among Australian academics. *E-Journal of Applied Psychology*, 8(1), 25-37.
- Bryman, A. (2007). Effective leadership in higher education: A literature review. *Studies in Higher Education*, 32(6), 693–710.
- Chen, S., & Wright, C. (2017). The role of school environment in teacher commitment: A structural equation modeling approach. *Journal of Educational Research*, 110(4), 456-464.
- Cheng, E. C. K. (2019). Transformational leadership and teacher leadership in schools: A structural equation model of teacher leadership development and effective teaching practice. *Educational Management Administration & Leadership*, 47(5), 774-793.
- Cheng, Y., & Zhang, J. (2018). Teaching Chinese as a foreign language: The role of working environment and resources. *International Journal of Chinese Language Education*, 5(3), 55-71.
- Chong, S., & Tee, M. Y. (2022). Teacher burnout and job satisfaction among Mandarin teachers in Malaysia: A case study. *Journal of Language and Education*, 11(3), 45-58.
- Coe, R., Aloisi, C., Higgins, S., & Major, L. E. (2014). What makes great teaching? Review of the underpinning research. *Sutton Trust*.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98-104.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
- Danielson, C. (2013). *The framework for teaching: Evaluation instrument*. The Danielson Group.
- Darabi, M., Macaskill, A., & Reidy, L. (2017). Stress among UK academics: Identifying who copes best. *Journal of Further and Higher Education*, 41(3), 393-412.

- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. *Applied Developmental Science, 24*(2), 97-140.
- Darling-Hammond, L., Hyster, M. E., & Gardner, M. (2020). *Effective teacher professional development*. Learning Policy Institute.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method*. Wiley.
- Everson, M. E. (2009). *Teaching Chinese: Linguistic, socio-cultural, and pedagogical perspectives*. Routledge.
- Fang, Z., & Warschauer, M. (2004). Technology and curriculum reform in China: A case study. *Educational Technology Research and Development, 52*(1), 48-66.
- Gao, X., & Zhao, Y. (2020). Challenges and coping strategies in teaching Mandarin as a foreign language in higher education. *Journal of Chinese Language Teaching, 10*(2), 123-138.
- Ghazali Darusalam, & Sufian Hussin. (2018). *Metodologi penyelidikan dalam pendidikan: Amalan dan analisis kajian*. Universiti Malaya.
- Gillespie, N. A., Walsh, M., Winefield, A. H., Dua, J., & Stough, C. (2001). Occupational stress in universities: Staff perceptions of the causes, consequences, and moderators of stress. *Work & Stress, 15*(1), 53-72.
- Gmelch, W. H., & Wilke, P. K. (2010). Stress in academic leadership: Symptoms, causes, and responses. *New Directions for Higher Education, 2010*(151), 5-13.
- Goe, L., Bell, C., & Little, O. (2008). *Approaches to evaluating teacher effectiveness: A research synthesis*. National Comprehensive Center for Teacher Quality.
- Goleman, D. (2000). Leadership that gets results. *Harvard Business Review, 78*(2), 78-90.
- Groves, R. M., & Peytcheva, E. (2008). The impact of nonresponse rates on nonresponse bias. *Public Opinion Quarterly, 72*(2), 167-189.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Hoe, C. H., Lim, T. L., & Goh, C. L. (2017). Mandarin language teaching and learning in Malaysian universities: A survey. *Malaysian Journal of Chinese Studies, 6*(1), 42-53.

- Hoe Foo Terng, Liaw Shun Chone, Lim Teck Heng, & Rasaya, A. (2017). Pertinent information for potential Mandarin teachers in Malaysia. *International Academic Research Journal of Social Science*, 3(1), 37-41.
- Hoque, A. S. M. M., Siddiqui, B. A., Awang, Z. B., & Baharu, S. M. A. T. (2018). Exploratory factor analysis of entrepreneurial orientation in the context of Bangladeshi small and medium enterprises (SMEs). *European Journal of Management and Marketing Studies*, 3(2), 81-94.
- Houston, D., Meyer, L. H., & Paewai, S. (2006). Academic staff workloads and job satisfaction: Expectations and values in academe. *Journal of Higher Education Policy and Management*, 28(1), 17-30.
- Houston, D., Meyer, L. H., & Paewai, S. (2006). Academic workload and quality. *Higher Education*, 52(4), 557-573.
- Johnson, S. M., & Stevens, M. (2001). *Beyond the classroom: Why school reform has failed and what parents need to do*. Johns Hopkins University Press.
- Karasek, R. A., Brisson, C., Kawachi, I., et al. (1998). The Job Content Questionnaire (JCQ): An instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of Occupational Health Psychology*, 3(4), 322-355.
- Kember, D., & McNaught, C. (2007). *Enhancing university teaching: Lessons from research into award-winning teachers*. Routledge.
- Kinman, G., & Jones, F. (2008). Effort-reward imbalance and overcommitment: Predicting strain in academic employees in the United Kingdom. *International Journal of Stress Management*, 15(4), 381-395.
- Kinman, G., & Wray, S. (2013). Higher stress: A survey of stress and well-being among staff in higher education. *University and College Union*.
- Kouzes, J. M., & Posner, B. Z. (2017). *The leadership challenge: How to make extraordinary things happen in organizations* (6th ed.). Wiley.
- Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress*, 19(3), 192-207.
- Kyriakides, L., Creemers, B. P. M., & Antoniou, P. (2009). Teacher behaviour and student outcomes: Suggestions for research on teacher training and professional development. *Teaching and Teacher Education*, 25(1), 12-23.

- LeBlanc, M. M., & Kelloway, E. K. (2002). The work stress scale: The development and validation of a scale to measure work-related stress. *Canadian Journal of Behavioural Science, 34*(2), 163-175.
- Lee, H., & Smith, J. (2015). The effects of workload on teacher performance and student outcomes: A meta-analysis. *Teaching and Teacher Education, 50*, 91-102.
- Lee, W., & Klerk, N. (2017). Measuring academic workload: The Workload Scale for University Faculty (WSUF). *Higher Education Research & Development, 36*(2), 314-329.
- Leithwood, K., & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers, and their classroom practices. *School Effectiveness and School Improvement, 17*(2), 201-227.
- Leithwood, K., Day, C., Sammons, P., Harris, A., & Hopkins, D. (2006). *Seven strong claims about successful school leadership*. National College for School Leadership.
- Lim, C. H., & Goh, C. L. (2017). Effectiveness of Mandarin language teaching in Malaysian universities: Pedagogical approaches and challenges. *Journal of Education and Language Studies, 9*(2), 123-136.
- Lim, S. K., & Goh, C. L. (2017). Teaching Mandarin in Malaysia: Best practices and challenges. *Education Research Journal*.
- Lim, T. L., & Goh, C. L. (2017). Challenges in Mandarin language teaching in Malaysian higher education institutions. *Malaysian Journal of Languages and Linguistics, 2*(2), 35-45.
- Liu, H., & Lee, C. (2016). The impact of leadership styles on teachers' job satisfaction and performance. *Journal of Educational Administration, 54*(5), 576-598.
- Liu, M., & Meng, L. (2022). Exploring the teaching of Mandarin in higher education. *Journal of Language and Education, 8*(1), 45-56.
- Liu, M., & Wang, H. (2019). Managing workload in Mandarin language instruction. *Language Teaching Research, 24*(6), 765-780.
- Liu, X., & Li, Y. (2017). The influence of working environment on Mandarin teachers' job satisfaction and teaching quality. *Educational Research and Reviews, 12*(4), 202-211.

- Marsh, H. W. (1982). The influence of student and course characteristics on the validity of student evaluations of teaching. *Journal of Educational Psychology, 74*(4), 561-576.
- Marzano, R. J. (2017). *The new art and science of teaching*. Solution Tree Press.
- Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. ASCD.
- McCoy, L. P., & Theodoulou, N. (2016). Factors influencing survey response times: An analysis. *Journal of Survey Statistics and Methodology, 4*(2), 231-247.
- McEwen, B. S., & Sapolsky, R. M. (1995). Stress and cognitive function. *Current Opinion in Neurobiology, 5*(2), 205-216.
- Northouse, P. G. (2018). *Leadership: Theory and practice* (8th ed.). Sage.
- Patterson, M. G., West, M. A., Shackleton, V. J., et al. (2005). Validating the Organizational Climate Measure: A review of the available evidence. *International Journal of Selection and Assessment, 13*(2), 139-160.
- Qiu, J., & Tang, L. (2021). The pressure of rising demand: Workload management for Mandarin teachers in modern education. *Educational Management Administration & Leadership, 49*(3), 449-465.
- Raj, R. G., & Al-Mahdy, Y. F. H. (2016). Occupational stress among university teachers: A comparative study. *Journal of Educational Psychology, 38*(2), 249-266.
- Richards, J. C., & Rodgers, T. S. (2014). *Approaches and methods in language teaching*. Cambridge University Press.
- Roffey-Barentsen, J., & Malthouse, R. (2013). *Reflective practice in education and training*. SAGE Publications.
- Sandi, C. (2013). Stress and cognition. *Wiley Interdisciplinary Reviews: Cognitive Science, 4*(3), 245-261.
- Shatzer, R. H., Caldarella, P., Hallam, P. R., & Brown, B. L. (2014). Comparing the effects of instructional and transformational leadership on student achievement: Implications for practice. *Educational Management Administration & Leadership, 42*(4), 445-459.
- Shulman, L. S. (2022a). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(1), 1-22.

- Shulman, L. S. (2022b). Pedagogies of uncertainty: Teaching in the era of dynamic knowledge and competency. *Educational Researcher*.
- Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional exhaustion. *Teaching and Teacher Education, 27*(6), 1029-1038.
- Smith, D. B., & Brown, T. J. (2015). Assessing academic workload: The Academic Workload Assessment Questionnaire (AWAQ). *Journal of Higher Education Policy and Management, 37*(1), 58-74.
- Smith, L., & Brown, K. (2015). The effect of workplace environment on faculty satisfaction and productivity. *Educational Management Administration & Leadership, 43*(5), 668-684.
- Stronge, J. H. (2018). *Qualities of effective teachers*. ASCD.
- Sun, C. (2006). *Chinese: A linguistic introduction*. Cambridge University Press.
- Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research, 83*(3), 357-385.
- Thompson, G., McKinney, L., & McKinney, D. (2004). The Teaching Performance Inventory: An instrument for evaluating teaching effectiveness. *Journal of College Teaching & Learning, 1*(7), 23-36.
- Tight, M. (2010). Are academic workloads increasing? The post-war survey evidence in the UK. *Higher Education Quarterly, 64*(2), 200-215.
- Tsui, A. B. M. (2003). *Understanding expertise in teaching: Case studies of second language teachers*. Cambridge University Press.
- Tucker, P. D., & Stronge, J. H. (2005). *Linking teacher evaluation and student learning*. ASCD.
- Vardi, I. (2009). The impacts of different teaching and learning approaches on students' perceptions of their workload. *Studies in Higher Education, 34*(6), 745-760.
- Wang, D., & Curdt-Christiansen, X. L. (2016a). Teaching Chinese as a foreign language in China: A sociocultural perspective. *Language Teaching Research, 20*(1), 23-40.
- Wang, D., & Curdt-Christiansen, X. L. (2016b). Teaching Chinese as a foreign language in Europe: Challenges and strategies. *Language Policy, 15*(3), 321-341.

- Wang, L., & Curdt-Christiansen, X. L. (2016a). The challenges of teaching Chinese as a foreign language: Insights from Mandarin language teachers. *Language Teaching Research*, 20(1), 1-21.
- Wang, L., & Curdt-Christiansen, X. L. (2016b). The impact of teaching environment on Mandarin language teachers' performance: A case study. *Asian-Pacific Journal of Second and Foreign Language Education*, 1(1), 14.
- Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993). Toward a knowledge base for school learning. *Review of Educational Research*, 63(3), 249-294.
- Wang, X., & Curdt-Christiansen, X. L. (2016). Teaching Mandarin as a foreign language in UK schools: Challenges and strategies. *The Language Learning Journal*, 44(2), 196-213.
- Winefield, A. H., Gillespie, N., Stough, C., Dua, J., Hapuarachchi, J., & Boyd, C. (2003). Occupational stress in Australian university staff: Results from a national survey. *International Journal of Stress Management*, 10(1), 51-63.
- Zhao, H., & Liu, H. (2020). Mandarin teaching in global contexts: The impact of working conditions on teaching effectiveness. *Journal of Chinese Language and Culture*, 8(2), 45-62.
- Zhao, Y., & Liu, Z. (2020). The global spread of Mandarin: Impact and implications. *Journal of Chinese Language Studies*, 12(3), 75-92.
- Zhu, W., & Cooper, C. L. (2016). Workplace stress and its impact on employee performance: The role of the working environment. *International Journal of Stress Management*, 23(4), 431-450.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods* (9th ed.). Cengage Learning.

PREJUDICE FACED BY MUSLIMS IN THE WEST: EXPERIENCES, COUNSELING AND SOCIAL JUSTICE

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Abstract

Islamophobia has been defined as a close-minded prejudice against or hatred of Islam and Muslims. This article discusses Islamophobia in the West and how the counseling profession could help in minimizing its effect in counselor education. Suggestions are given to what counselors and counselor educators could do for themselves and their clients to help deal with this issue, namely: (i) know more about the faith, (ii) be aware of your own prejudice, (iii) advocacy for Muslim clients, and (iv) social justice for Muslims. It is hoped that counselors and counselor educators take a more proactive stand in helping to advocate against hate and prejudice against discriminated groups.

Keywords: Islamophobia, counseling, social justice.

INTRODUCTION

9/11. A horrifying event. I still remember the day like it was yesterday. I was still in high school, and didn't really know much about world events or terrorism at the time. I was in Malaysia at around 9 pm local time when our regular television programming suddenly stopped to give us breaking news of the terror that was unfolding in New York City. I couldn't believe what I saw. It appeared that planes were crashing into the twin towers in NYC. My whole family was glued to the television, and we couldn't believe what just happened. We watched in horror as we was the twin towers come crashing down. As we were watching the events unfold, I remembered thinking to myself who could have done such heinous act.

Then I woke up the next day to find out that the terror acts were done by people who identified themselves as Muslims. It was shocking to me, as the people who committed the atrocities could potentially share the same faith as I am. However, I was puzzled. There was nothing written in the Qur'an or the Hadith which supports acts of terror on innocent victims. The fact they claimed the incident was done in the name of God made me angry. And confused. God would never support such act, I thought. The whole world, including the majority of Muslims, condemned the terror acts of a certain group who identify themselves as Muslims. However, hate crimes and prejudice against Muslims became more intense across the US after 9/11. It is unfortunate that because of the actions of a select few, the whole Muslim population is getting the brunt of all

discrimination. The terror acts in New York didn't just kill innocent victims, but also painted a negative light on a faith that many do not understand in the first place. It is also the event which triggered a huge wave of Islamophobia which has continued even to this day.

ISLAMOPHOBIA IN THE WEST

So, what is Islamophobia? The Council on American-Islamic Relations (CAIR) (2024) defines it as "close-minded prejudice against or hatred of Islam and Muslims". It is important to note that discrimination towards Muslim did not start after 9/11, but rather the event triggered a massive wave of hatred towards Muslims. In fact, it could be said that hate crimes against Muslims have risen since 9/11.

Flash forward 25 years to 2024, it seemed that things have not really improved. Bin Laden is dead, but prejudice towards the Muslim population continues. The word Muslim seemed to be interconnected to terrorism that it becomes difficult for Muslims to even identify themselves as one. Some Muslims I know try to hide the fact that they are Muslims out of fear that they would face discrimination. Some Muslim women even avoid wearing the *hijab* (headscarf) because of that same fear. Muslims are also not allowed to use certain Arabic words, such as Jihad, a word which literally translates to "struggle" from Arabic in English, because of its connotations to terrorism. Ironic, since for Muslims the greatest Jihad is the struggle within oneself, for example controlling one's anger, something that everybody could relate to. Islamophobia can also be seen in different types of persecution and policies, such as banning religious practices, ethnic profiling and increased surveillance on Muslims (Naderi, 2018).

One of the events that I could relate to happened during the Boston marathon bombing in 2013. It was shocking a bomb exploded during such an event. How could anyone do such a thing? Then, I was reminded somewhat of 9/11, and actually secretly hoped that it wasn't a Muslim who was behind the bombing. I didn't want people to have the more false impressions that Muslims are terrorists. I remembered watching the news on CNN to get the latest news on it. Then, it was later revealed that the bombers were in fact Muslims. I was really let down by this. However, the most unnerving experience for me was reading the comments on Yahoo regarding the bombing. The amount of hate in the comments section was certainly very unsettling for me. Some were calling for all Muslims to be expelled from America, while others were even more damning. The media plays an important role in nullifying the effects of Islamophobia, with hate crimes and fear increasing as a direct effect of negative misrepresentation of the Muslim population (Haque, Tubbs, Kahumoku-Fessler, & Brown, 2019).

WHAT TO DO ABOUT IT?

Here are some of my suggestions on what counselors and counselor educators could do for themselves and also for their clients to help deal with this issue:

Know More about the Faith

When we talk about Multicultural Counseling Competencies (MCC), one of the most important aspects is about having the knowledge. However, based on my experiences asking around, it could be said that my fellow counseling students do not have much knowledge or understanding of Islam. What they know about Islam is normally what they see in the media, and that portrayal does not always reflect the reality of the faith. This to me is alarming as it will create false assumptions about Muslims and how they live their life. The most that counselors could do is to at least know the basics of the Muslim faith (and other religious faiths as well). For example, the five pillars of Islam is something that is important to most Muslims, and this could be used to assess their levels of spirituality/religiosity and how they are affected by Islamophobia. Having knowledge about the Islam could help counselors to develop rapport with their clients and an empathic understanding of what they are going through.

Be Aware of Your Own Prejudice

I believe that counselors should also be aware of their own prejudices towards the Muslim faith. I say this because sometimes we are not aware of our own biasness if we do not explore it for ourselves. Sometimes, it is easy to say that we have no prejudice because of many factors. Sometimes it is conditional. For example, a lot of people would say "I have friends who are Muslims, so I don't have any prejudice against them". Having Muslims friends does not equate to not having any ill intent towards any population. Or some may even say, "I am not a prejudiced person, but...". Some of the views may come from the fact people are only aware of the extremist Muslims who perform terrorist acts, but they do not represent the global Muslim population. Unfortunate, this is the population that gets highlighted in the media, so it may or may not influence the views on Muslims. Some also view Muslims negatively because they are not as acculturated to the American culture as other minority groups in the US. For example, no drinking, adherence to Ramadan etc. So, it is important to know our stance on Muslims. The levels could vary from one extreme continuum to another, so it could range from having extreme hate for all Muslims to having high tolerance and acceptance on their way of life.

Advocacy for Muslim Clients

I would also encourage counselors to advocate for their clients, especially if they are struggling with the prejudice of being a Muslim. To me, advocacy could be done on an individual basis or it could also go beyond that. Empathic understanding is an important

element in the helping process and would help in feel that they are at least not alone in their struggle. Counselors could help by empowering their clients about the injustices that they have suffered and encouraging them to make a stand if they wish to do so. Beyond the individual counseling realm, there are also groups which help advocate for discriminated Muslims. For example, the Council on American-Islamic Relations (CAIR) and Muslim Advocates helps to advocate on behalf of Muslims and others who have experienced religious discrimination, defamation or hate crimes. Therefore, counselors who are interested to advocate for discriminated Muslims or need a resource for their clients could look at the groups for this purpose. Below is a link to their websites.

Social Justice for Muslims

Hate crimes and prejudice against Muslims has been happening for quite some time, even before 9/11. Unfortunately, the hate and discrimination faced by Muslims are generally not recognized by the American population. I propose steps need to be taken to bring into awareness the issue. This is supported by Smith (2020) who stated that the fundamental principles of a person-centred, social justice and critical reflective frameworks needs to be implemented to combat rising Islamophobia. The first most important aspect is the recognition that it is indeed an issue and that it need to be solved in a more active manner. Secondly, counselors and counselor educators need to make a stand regarding the issues that has been affecting Muslims for quite some time. By doing this, they could bring awareness to the general population about their discrimination of the Muslim population.

CONCLUSION

“O mankind! We created you from a single (pair) of a male and a female, and made you into nations and tribes, that ye may know each other [not that ye may despise (each other)]. Verily the most honored of you in the sight of God is (he who is) the most righteous of you.” Al-Hujurat (49:13)

Islam has always championed tolerance and understanding between one another, regardless of their race or creed. Unfortunately, all of this is lost after the faith has been hijacked by terrorist. For me, counselors have a hard job in championing for tolerance and understanding for the Muslim population. Islamophobia, or hate towards Muslims, is real. Unfortunately, in our field there is little being research being done on it. Most literature on Islam in the profession focuses on the knowledge, competency and skills of counselors in working with effectively with Muslims, but the hate and prejudice faced by Muslims almost everyday is not explored. It is as if the prejudice against the Muslim faith does not exist at all. And it is not just me, but other Muslims also face the same realities. It is hoped that counselors and counselor educators take a more proactive stand in

helping to advocate against hate and prejudice against discriminated groups, specifically for Muslims in this case.

REFERENCE

- Council on American Islamic Relations (CAIR) (2024 July 22). *Islamophobia*.
https://www.ohchr.org/sites/default/files/Documents/HRBodies/CERD/ConsultationCivilSociety/NGOs/Council_on_American-Islamic_Relations_CAIR.docx
- Haque A., Tubbs C. Y., Kahumoku-Fessler E. P., Brown M. D. (2019). Microaggressions and Islamophobia: Experiences of Muslims across the United States and clinical implications. *Journal of Marital and Family Therapy*, 45(1), 76–91.
- Naderi P. S. (2018). Non-threatening Muslim men: Stigma management and religious observance in America. *Qualitative Sociology*, 41(1), 41–62.
- Smith S. J. (2020). Challenging Islamophobia in Canada: Non-Muslim social workers as allies with the Muslim community. *Journal of Religion & Spirituality in Social Work: Social Thought*, 39(1), 27–46.

ALIGNING NEGOTIATION GOALS WITH THE MADANI FRAMEWORK: A POWERFUL APPROACH TO RESOLVING INDUSTRIAL DISPUTES

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Abstract

Negotiation is a simple form of industrial dispute resolution used to settle disputes under the Industrial Relations Act 1967 (Act 177) (Malaysia). It is used commonly in the bargaining process relating to the terms in a collective agreement between employers and representatives of a trade union of employees. In a bargaining process that lacks good negotiation skills, the employer-workmen relationship is bound to be affected apart from the inability to meet the needs and sustain the future of members of a trade union of workers. Malaysia Madani is a policy framework focused on good governance, sustainable development and racial harmony. In light of this policy and the need to resolve industrial disputes, this paper highlights the following matters: First, negotiation as a form of industrial dispute resolution, the role of negotiation in resolving industrial disputes, and lastly the goals of negotiation that align with the Madani framework.

Keywords: *Negotiation, dispute resolution, Madani framework, Industrial disputes*

INTRODUCTION

Malaysia Madani (English: Civilised Malaysia) is a policy framework introduced by the administration of the 10th Prime Minister, Yang Amat Berhormat Dato' Seri Anwar Ibrahim on Jan 19, 2023 ("MyGOV - Belanjawan 2023". Government of Malaysia). The concept focuses mainly on good governance, sustainable development and racial harmony. The Madani policy adopts six underlying ideals – keMampanan (Sustainability), Kesejahteraan (Prosperity), Daya Cipta (Innovation), hormat (Respect), keyakinan (Trust) and Ihsan (Compassion) (The Star, 2023; Prime Minister's Office of Malaysia Official Website).

In Malaysia's industrial relations system, it is important to use the appropriate dispute resolution mechanism to maintain industrial harmony. One of the primary methods of resolving disputes is through negotiation. The Malaysian Trade Union Congress (MTUC) has endorsed negotiation as a preferable alternative to picketing (BERNAMA, 2007). However, negotiating trade disputes under the Malaysian Industrial Act 1967 (Act 177) can be quite challenging. Frequently, employers fail to

negotiate effectively with workers' unions, leading to unresolved issues regarding work terms and conditions, as well as differing interpretations of collective agreements or Industrial Court awards (Maimunah Aminudin, 2020; D'Cruz, 2001).

Anti-union actions involve the dismissal or retrenchment of trade union members, forced resignation, and attempts to prevent union formation by filing judicial reviews against applications for in-house unions (Jaya Ganesan, 2016; Ong Sin Rua et al, 2014). These situations are not in line with the Malaysia Madani framework, especially when the failure to negotiate effectively between the parties results in actions that harm the members of employees' union. This article offers a preliminary overview of aligning negotiation goals with the Madani framework to resolve industrial disputes.

'NEGOTIATION' AS A DISPUTE RESOLUTION MECHANISM IN INDUSTRIAL DISPUTES

Negotiation is considered the primary method of resolving disputes. While arbitration and mediation are established mechanisms of Alternative Dispute Resolution (ADR), negotiation is the preferred method due to its flexibility. It allows the involved parties to meet in person and have control over the dispute-resolution process (Cornell Law School, 2021). Negotiation enables parties with differences of opinion and expectations to resolve their disputes on mutual terms (Churhman, 2019; Stoshikj & Greguš, 2014).

Like other types of dispute resolution, the outcome of negotiation is as follows: win-lose; win-win; compromise or win-some; or lose-lose. However, in a successful negotiation, neither party to a dispute is a loser or a victor (Wertheim, 2002).

The steps in negotiation in matters relating to terms in a collective agreement are as follows:

1. **Preparation (for effective dialogue):** Gather all essential information. Identify the interests, needs, and goals of both parties.
2. **Opening:** Establish a definite tone, build rapport, and set the agenda for the negotiation process.
3. **Exploring Interests:** Each party discusses their interests and concerns. Active listening and open communication are crucial to identify underlying needs.
4. **Generating Options:** Brainstorm any possible solutions that might satisfy both parties' interests.
5. **Evaluating Options:** Evaluate the viability, benefits, and drawbacks of every option. This step requires critical thinking and compromise.
6. **Reaching Agreement:** Select the most acceptable solution for all parties and formalise the agreement. Ensure clarity in terms and conditions to avoid future disputes.
7. **Implementing and Monitoring:** Implement the agreed solution and monitor compliance to ensure the dispute is fully resolved and to avoid repetition.

THE ROLE OF NEGOTIATION TO RESOLVE INDUSTRIAL DISPUTES

In Malaysia, the Industrial Relations Act (Act 177) (IRA) promotes and maintains industrial harmony apart from providing the regulation of the relations between employers and workmen and their trade unions. In addition, the IRA also provides the prevention and settlement of any differences or disputes arising from their relationship and generally deals with trade disputes and matters related to it.

Trade unions and employers often engage in collective bargaining to negotiate terms and conditions of employment. Successful negotiations can prevent disputes from arising. In Malaysia, the Labour Department assists in resolving disputes related to dissatisfaction with employment contracts, wages, and other employment conditions.

The IRA regulates employment relationships and contains, among others, the provision on representation on unfair dismissal, a claim for recognition by a trade union, and collective bargaining. The IRA (s. 13) provides the procedure for collective bargaining. In practice, collective bargaining can involve a single employer and a union of workers or between a group of employers and a union of workers. The representatives of a union of workers can begin negotiation by inviting the employer to collective bargaining after receiving employer recognition to represent workers. Both the employer and union of workers shall file a request for cognizance of the collective agreement with the Industrial Court if a consensus is reached.

The call for negotiation is consistent with the expectation of the industrial court case of *Shangri-La Hotel (KL) Sdn. Bhd. and Kesatuan Kebangsaan Pekerja-Pekerja Hotel, Bar dan Restoran Semenanjung Malaysia* (Award No: 785 of 2019), whereby the court stated that parties to the action should negotiate before resorting to the courts. Likewise, negotiation can lead to good industrial relations. Effective negotiation allows employers to remind themselves to fulfil their responsibility to ensure that the welfare of their workers is taken care of. Thus, a successful negotiation prevents workers from lodging complaints of non-compliance with any terms of the collective agreement as seen in the case of *Kesatuan Kebangsaan Pekerja-Pekerja Hotel, Bar & Restoran Semenanjung Malaysia, and Crystal Crown Hotel & Resort Sdn. Bhd. (Crystal Crown Hotel Petaling Jaya* (Award No. 2 of 2020).

Engaging in effective negotiations reminds employers to avoid unpleasant issues arising from unfair managerial decisions that may end up in the industrial courts. For example, employers should refrain from providing low salaries and fewer fringe benefits comparable to other similar companies in the same trade. In negotiation, the employers should avoid hostility and accommodate the request of a union of workers (especially during collective bargaining) by tolerating it as reasonably as possible within the confines of the law. For non-unionized companies, employers should be willing to involve employees in all levels of decision-making and disregard obstacles to effective negotiation. Such practice will encourage healthy interactions and improve industrial relations.

GOALS OF NEGOTIATION THAT ALIGN WITH THE MADANI FRAMEWORK

Negotiators need to plan before starting the negotiation process to clearly define their goals and underlying interests (Wertheim, 2002). The stages in negotiation include preparation, presentation and justification, bargaining, making offers and counter-offers, using various tactics, and finally choosing an option or agreement (Zohar, 2015). Additionally, the representatives of the parties involved must use a strategic plan during the negotiation process to achieve the negotiation's objectives (Thompson, Wang & Gunia, 2010; Alavoinea and Estieub, 2015). Therefore, negotiation requires each disputant to strategize the most suitable means to achieve their objectives.

Based on the above and the context of negotiating within the Madani framework, negotiators must ensure the goals of negotiation should emphasise the following:

(1) Encourage Effective Dialogue by controlling one's emotions and being willing to listen to the other

According to Edwards et al. (2017), any miscommunication must be addressed immediately to prevent disruption to the 'strained' relationship between the employer and the employee. In a recent study by Crockett et al. (2022), a person who suffers from a misunderstanding interaction reported "lower interaction satisfaction, motivation, and poorer performance than one who gives no instructions and that "feeling misunderstood predicted higher perceived stress, lower life satisfaction and motivation as well as less healthy cortisol slopes." Both parties' representatives must be willing to foster open communication to resolve disputes peacefully.

Negotiators must maintain control over their emotions during discussions to promote open communication. It is important never to become overwhelmed by emotions at the bargaining table. People who can manage their emotions are viewed positively by others (Côté, Gyarak, and Levenson, 2010). Being able to control emotions allows parties to consider each other's offers, engage in open discussions, and reach mutually beneficial agreements. Communication involves listening, speaking, and writing (Hunsaker & Alessandra, 2008). Active listening is a specific communication skill (Gonzalez, 2009) that is linked to effective communication (Jahromi, Tabatabaee, Abdar, & Rajabi, 2016) and enhances the working relationship between managers and staff (Jahromi, Tabatabaee, Abdar, & Rajabi, 2016).

Effective dialogue in the negotiation process contributes to the following:

- (a) **Building Trust:** Trust is established when both parties demonstrate sincerity, transparency, honesty, and a willingness to understand the other party's perspective.
- (b) **Promoting Collaboration:** Parties who can speak freely without constraints may negotiate terms that promote beneficial outcomes.

- (c) Encouraging Active Listening: Being attentive and listening allows all views to be heard and respected.
- (d) Resolving Conflicts: Negotiation helps in finding possible solutions to underlying issues and prevents communication breakdowns.
- (e) Empowering Workers: Workers can express their needs and concerns, leading to open and honest communication.
- (f) Creating a Convenient Space: Effective dialogue often involves setting ground rules that ensure a respectful and convenient space for discussion. This encourages workers to share their thoughts without fear of retribution.

(2) Fair Treatment

Fair treatment in the negotiation process means that the process is conducted transparently, addressing concerns, and drawing out balanced agreements that respect the rights and interests of all parties.

Negotiators must ensure that fair treatment in the negotiation process contributes to the following:

- (a) Balancing Interests: Engaging in discussions where both parties can express their needs and concerns leads to fair and considerate outcomes.
- (b) Ensuring Transparency: Open and transparent discussions help workers understand the rationale behind decisions, reducing perceptions of unfair treatment.
- (c) Addressing Inequities: By engaging in negotiation, workers gain the opportunity to express concerns regarding unfair practices and treatment disparities. Management can effectively address these issues, ensuring that policies and practices are applied equitably to all employees.
- (d) Empowering Workers' Voice: Through negotiation, workers can voice their concerns about unfair practices and treatment disparities, allowing management to address these issues effectively and ensure that policies and practices are applied equitably to all employees.
- (e) Conflict Resolution: Grievances that are addressed through negotiation enable both parties to reach a fair resolution that respects the rights and needs of employees.
- (f) Promoting Equity in Compensation and Benefits: Negotiation is crucial in ensuring that compensation and benefits are distributed fairly, taking into account factors such as experience, performance, and industry standards. By engaging in negotiation, we can prevent disparities and guarantee that all workers receive what they rightfully deserve.
- (g) Enhancing Job Security: In negotiations related to contracts, job roles, or restructuring, workers can negotiate terms that protect their job security and ensure that any changes are implemented fairly.

(3) Pay attention to certain areas of disputes relating to Social Justice

Negotiation must allow a free flow of discussion on matters touching on social justice on the following:

Social justice impact can be seen in the following manner:

- (a) negotiation for fair wages, benefits, and working conditions. This helps reduce income inequality and promotes economic justice.
- (b) Promoting Equal Opportunity in work. Representatives can push for policies that ensure equal opportunities for all workers regardless of gender, race, age, or other factors. Negotiations may focus on implementing affirmative action, anti-discrimination policies, and diversity training, aligning workplace practices with the broader goal of social equity.
- (c) Ensuring Health and Safety Standards to ensure the right to a safe working environment. This aligns with the social justice principle that all individuals have the right to safe and healthy working conditions.
- (d) Securing Job Security and Stability to protect against exploitation and unemployment. Thus, negotiators must focus on job security, preventing unfair layoffs, and ensuring that employees have stable employment. This helps protect workers from the negative effects of economic fluctuations and aligns with social justice goals related to economic security.
- (e) Work-Life Balance. Representatives can negotiate for policies that promote work-life balance, such as flexible working hours, parental leave, and vacation time. This helps employees maintain a healthy balance between their work responsibilities and personal lives, that contributes to overall well-being.
- (f) Facilitating Collective Bargaining and Participation. Collective bargaining empowers workers by giving them a collective voice in decision-making processes. This aligns with the social justice goal of ensuring that workers can participate in decisions that affect their lives and livelihoods.

SUMMARY OF ALIGNING THE GOALS OF NEGOTIATION WITH THE MADANI FRAMEWORK

Harmony and Unity

The Madani concept highlights the importance of having a united society and unity. As a non-adversarial method, negotiation aims to find a mutually acceptable solution that maintains relationships and promotes social cohesion.

Justice and Fairness

The Madani concept emphasizes fairness and justice as essential components in resolving disputes. Therefore, negotiations should be conducted in a way that enables all parties to express their concerns and needs, and work together towards a just resolution that respects the rights and interests of everyone involved.

Mutual Respect and Understanding

Effective negotiation requires understanding and respecting each party's perspective. This aligns with the Madani principles of reciprocal respect, promoting a more empathetic and constructive dialogue.

CONCLUSION

In summary, the above discussion shows that negotiating industrial disputes within the Madani framework creates a harmonious and equitable working atmosphere, balancing the interests of employers and employees while promoting social justice and compassion. Meanwhile, aligning the negotiation's goals to the Madani concept under the Prosperity core, means there will be more opportunities to explore more pressing issues relating to job confirmation, job promotion and decent minimum wage rates to ensure the workers' well-being is taken care of. By aligning the goals of negotiation with the Madani framework, negotiators can effectively resolve industrial disputes and contribute to a more peaceful and cohesive society.

REFERENCES

- Avey J. B., Avolio B., Crossley C., Luthans F. (2009). Psychological ownership: theoretical extensions, measurement, and relation to work outcomes. *J. Organ. Behav.* 30,173–191. [10.1002/job.583](https://doi.org/10.1002/job.583)
- Alavoinea, C. and Estieub, C. (2015). Strategic issues in Negotiation Part 2. *Procedia - Social and Behavioral Sciences* 207 (2015) 335 – 343
- Bernamea, August 8, 2007 (Accessed on July 30, 2023).
- Curry, S., Gravina, N., Sleiman, A., & Richard, E. (2019). The Effects of Engaging in Rapport-Building Behaviors on Productivity and Discretionary Effort, *Journal of Organizational Behavior Management* 39(1):1-14. DOI:[10.1080/01608061.2019.1667940](https://doi.org/10.1080/01608061.2019.1667940)
- Côté, S., Gyurak, A., & Levenson, R. W. (2010). The ability to regulate emotion is associated with greater well-being, income, and socioeconomic status. *Emotion*, 10(6), 923–933. <https://doi.org/10.1037/a0021156>
- Churchman, D. (2019). Negotiation. In: *The Palgrave Encyclopedia of Peace and Conflict Studies*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-11795-5_60-1 (accessed on July 31, 2023).
- Crockett, E. E., Pollmann, M. M., & Olvera, A. P. (2022). You just don't get it: The impact of misunderstanding on psychological and physiological health. *Journal*

- of *Social and Personal Relationships*, 39(9), 2847–2868. <https://doi.org/10.1177/02654075221089903>
- Cornell Law School (2021). Alternative Dispute Resolution. https://www.law.cornell.edu/wex/alternative_dispute_resolution (accessed on July 31, 2023).
- D' Cruz, M.N. (2001). A Comprehensive Guide to Industrial Relations in Malaysia. Malaysia: Malayan Law Journal, 1.
- Edwards, R., Bybee, B. T., Frost, J. K., Harvey, A. J., & Navarro, M. (2017). That's Not What I Meant: How Misunderstanding Is Related to Channel and Perspective-Taking. *Journal of Language and Social Psychology*, 36(2), 188–210. <https://doi.org/10.1177/0261927X16662968> (accessed on July 31, 2023).
- Gonzalez, T.D. Ph.D thesis. University of Phoenix; Arizona, USA: 2009. Impact of active listening training at a California state hospital: a quantitative study. https://scholar.google.com/scholar_lookup?title=PhD+thesis&author=TD+Gonzalez&publication_year=2009& (accessed on July 31, 2023).
- Ganesan, G. "A Review on Factors Contributing to Declining Trade Union Membership in Malaysia" *International Journal of Advanced and Applied Sciences*, 3(11) (2016), 93-98.
- Hunsaker PL, Alessandra T, Alessandra AJ. *The new art of managing people, updated and revised: Person-to-person skills, guidelines, and techniques every manager needs to guide, Direct, and Motivate the Team*. Simon and Schuster Inc; New York NY, USA: 2008.
- Industrial Relations Act 1967 (Act 177) (Malaysia)
- Jahromi V.K, Tabatabaee S.S, Abdar Z.E, Rajabi M. Active listening: The key of successful communication in hospital managers. *Electron Physician*. 2016 Mar 25;8(3):2123-8. doi: 10.19082/2123. PMID: 27123221; PMCID: PMC4844478.
- Li Y., Shi Y., Mao Y. (2018). The influence of empowering leadership on employees' voice behavior: the mediating role of psychological ownership. *Sci. Technol. Prog. Countermeasures*. 35,140–145. 10.6049/kjbydc.2017030824
- "MyGOV - Belanjawan 2023". Government of Malaysia. Retrieved 30 August 2024.
- Mazwin Nik Anis, Rahimy Rahim, Fatimah Zainal and Vanesa Devi "Madani – a humane concept". *The Star*. 20 January 2023. Retrieved 30 August 2024.
- Ong Sin Rua and et al, "Understanding the Declining of Trade Union Density: Literature Review and Conceptual Framework" *Sains Humanika* Vol.2, No. 2 (2014) :25–30
- Parijs, P. (2012). What Makes a Good Compromise? *Government and Opposition*, 47(3), 466-480. doi:10.1111/j.1477-7053.2012.01371.x

Prime Minister's Office of Malaysia Official Website.
<https://www.pmo.gov.my/2023/02/pm-anwar-unveils-malaysia-madani-logo/>
(accessed on 30 August 2024).

Schoop, M. Negotiation communication revisited. *Cent Eur J Oper Res* **29**, 163–176 (2021). <https://doi.org/10.1007/s10100-020-00730-5>

Stoshikj M & Greguš M.(2014).NSSs as a Solution to Negotiation Challenges in Enterprise Environment. 6th International Conference on Intelligent Networking and Collaborative Systems (INCoS-2014), September 10-12, Salerno, Italy:229-236.

Thompson L. L, Wang J, & Gunia B.C. (2010). Negotiation. *Annual Review of Psychology* 61:491-515.

Wertheim, E. (2002). *Negotiations and resolving conflicts: An overview*. Northeastern University, College of Business Administration. <https://www.europarc.org/communication-skills/pdf/Negotiation%20Skills.pdf>. (accessed on July 31, 2023).

Zohar, I. (2015). "The art of negotiation" Leadership skills required for negotiation in time of crisis. *Procedia - Social and Behavioral Sciences* 209 (2015) 540 – 548.

Industrial Cases (Malaysia)

Shangri-La Hotel (KL) Sdn. Bhd. And Kesatuan Kebangsaan Pekerja-Pekerja Hotel, Bar dan Restoran Semenanjung Malaysia (Award No: 785 of 2019)

Kesatuan Kebangsaan Pekerja-Pekerja Hotel, Bar & Restoran Semenanjung Malaysia, and Crystal Crown Hotel & Resort Sdn. Bhd. (Crystal Crown Hotel Petaling Jaya) (Award No. 2 of 2020).

A CONCEPTUAL STUDY OF MADANI CONCEPT IN ISLAMIC BUSINESS ETHICS AND MARKETING PRACTICES

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Abstract

The Malaysia Madani concept, introduced as a framework for national development, encapsulates a vision for a society rooted in ethical governance, inclusivity, and sustainable progress. The core values include sustainability (kemampanan), prosperity (kesejahteraan), innovation (daya cipta), respect (hormat), trust (keyakinan) and compassion (ihsan). This conceptual study explores the Malaysia Madani concept, which presents an integrated approach to Islamic business ethics and applies to marketing practices. This is particularly pertinent in today's globalized economy when ethical concerns are becoming more intricate. The research data gathering is based on a literature review of prior and recent reports and studies including Al-Quran and hadith on the Madani concept, Islamic business ethics, and Islamic marketing practices, The findings discussed the practical implications of the Madani concept and Islamic business ethics, as well as their relevance to contemporary marketing practices. By adopting this approach, Malaysian businesses can achieve both economic prosperity and make significant contributions to the ethical and sustainable advancement of society.

Keywords: *Madani concept, Islamic business ethics, marketing practices, conceptual study.*

INTRODUCTION

In recent years, there has been a growing interest in integrating Islamic principles into business ethics and marketing practices. This trend reflects the increasing recognition of the need for ethical frameworks that align with the cultural and religious values of

Muslims, as well as the broader global movement toward ethical business conduct (Niaz, 2020). The integration of Islamic principles into business practices is seen not only to ensure compliance with religious laws but also as a means to promote integrity, fairness, and social responsibility in the marketplace. As businesses around the globe deal with issues such as consumer trust, ethical advertising, and sustainability, Islamic ethics offer a robust foundation for addressing these challenges in a manner that resonates with both Muslim and non-Muslim stakeholders.

Several factors contribute to the growing interest in Islamic business ethics. First, the global Muslim population, which is projected to reach nearly 2.2 billion by 2030, (Pew Research Center, 2021) represents a significant and growing consumer base. Businesses seeking to engage with this demographic must navigate the complex relationship between market demands and religious values, which renders integrating Islamic principles increasingly relevant. Second, Islamic teachings strongly align with the broader ethical concerns that dominate contemporary business discourse, including the demand for transparency, the rise of consumer activism, and the need for sustainable practices (Mirakhor et al., 2020; Carrington et al., 2021). As a result, businesses are turning to Islamic ethics, not only to target Muslim consumers, but also to adopt practices that are ethically sound and socially responsible.

The relevance of Madani concept in contemporary business contexts cannot be overstated. As businesses navigate the complexities of the modern market, this concept offers a time-tested ethical framework that aligns with both religious values and contemporary ethical standards. In marketing, the pressure to achieve short-term returns can sometimes lead to unethical practices. Hence, the application of Madani concept with Islamic values shall provide a counterbalance that promotes long-term trust, social responsibility, and sustainability.

Moreover, the global business environment is increasingly characterized by diversity, with companies operating across multiple cultural and religious contexts. The universal values embedded in Madani concept such as justice, trustworthiness, and public well-being offer a common ethical ground that can guide businesses in their interactions with diverse stakeholders. By integrating these principles into their practices, businesses not only appeal to Muslim consumers but also demonstrate their commitment to ethical conduct, thereby enhancing their reputation and competitive advantage in the global market.

LITERATURE REVIEW

Madani Core Values and Islamic Ethics

The Malaysian government defined Madani as a synthesis of the Malaysian approach, incorporating current practices with innovative strategies to address emerging challenges and uncertainties. This approach is inspired by the concept of willingness to accept change, considering the suggestions of all levels of society who desire recovery

through substantive reforms for a more advanced and prosperous Malaysia (malaysiamadani.gov.my). Malaysia Madani aims to promote key ideas that encourage national growth and social cohesion, focusing on good governance, sustainable development, and racial harmony within the country. Six core values underpin the Madani concept, which include sustainability, prosperity, innovation, respect, trust, and compassion. These core values aim to enhance the quality of life in Malaysia and promote moral behaviours across various domains.

The first Madani core value is **sustainability**, which promotes ecologically conscious economic development and policies that strike a balance between present needs and future capacity to fulfil those needs (Aziz & Rusli, 2023). The Islamic context deeply roots sustainability in the concepts of oneness of God (*Tawhid*) and stewardship (*Khalifah*), mandating humans to act as caretakers of the earth (Siddiqui, 2019). Islamic teachings promote environmental protection and achieve a balance between current and future requirements. In addition, this is comparable to the concept of balance (*Mizan*) in the Quran, which emphasizes the importance of protecting the environment but not overdoing it so that future generations can benefit from sustainable growth (Ibrahim 2015). The Quran emphasizes the importance of maintaining balance and avoiding excess: *"And do not waste by extravagance. Indeed, He does not like those who waste"* (Quran 7:31). This principle aligns with modern sustainability practices, advocating for responsible consumption and environmental conservation.

Secondly, **prosperity** emphasizes the importance of supporting economic growth and financial stability that benefit all members of society, providing an equitable distribution of resources and opportunities to generate wealth. The aim is to guarantee universal access to essential services like healthcare and education, thereby promoting a society that is caring and helpful. This is consistent with Islam's overall emphasis on fairness and personal wellness (Al-Qaradawi, 2009). Prosperity in the Madani concept reflects a holistic approach to economic and social well-being. Islamic ethics promote prosperity by upholding the principles of justice and equity, ensuring equitable distribution of wealth and equal access to economic opportunities for all members of the ummah. The Quran states, *"Wealth and children are [but] adornment of the worldly life. But good deeds that remain are better to your Lord for reward and better for [one's] hope"* (Quran 18:46). This perspective encourages not only material prosperity but also the well-being of individuals and communities through ethical practices and social justice (Khan, 2020).

In order to stay ahead of the competition and go forward, the third core value of Madani is **innovation**, which encourages the development of new ideas and solutions. Innovation is vital for progress and adaptability in a rapidly changing world. Nasr (2002) stated, Islam has always promoted scientific research and technical progress as the pursuit of knowledge is considered a form of worship. He added that the desire for intellectual development stems from the concept that fresh ideas lead to achievement while adhering to Islamic norms (Nasr, 2002). In Islam, independent reasoning (*Ijtihad*) encourages the pursuit of knowledge and innovation while adhering to ethical

standards. The Prophet Muhammad's Hadith emphasizes the importance of seeking knowledge: "*Seeking knowledge is an obligation upon every Muslim*" (Ibn Majah, n.d., Book of Knowledge, Hadith 224). This principle supports the idea that innovation should be directed towards beneficial and ethical ends, promoting advancements that enhance societal welfare while respecting Islamic principles (Khalil, 2021; Madani, 2016).

The fourth Madani core value is **respect**, which stresses the importance of treating one another with respect and accepting cultural and racial differences to foster peaceful relationships and a stable community (Al-Qaradawi, 2009). Respect is fundamental in Islamic ethics, reflecting the value of manners and acts of goodness towards others. The Quran and hadith place a strong emphasis on mutual respect and dignity in interactions with others: "*And lower to them the wing of humility out of mercy and say, 'My Lord, have mercy upon them as they brought me up [when I was] small'*" (Quran 17:24). This value fosters a culture of mutual respect and harmony, reinforcing ethical behavior and consideration in personal and professional relationships (Amin, 2018). Respect is also consistent with the objectives of Islamic law (*Maqasid al-Shariah*), since it promotes respect for others and human dignity. This aligns with Shariah's purpose of preserving knowledge and family customs. Building a culture of respect and acceptance is beneficial to maintaining society stable and fair (Kamali, 2008).

Fifth, **trust** is essential for effective governance and societal peace, which means that institutions and the government must be honest, transparent, and accountable to the people they serve (Rashid, 2017). Public interest (*Maslahah*) is dependent on trust, because trust and transparency are essential for positive governance and community interactions. The overarching goal of increasing trust and well-being in society is consistent with ensuring that corporate operations are honest and responsible (Rashid, 2017; Aziz & Rusli, 2023). Trust is central to Islamic ethics, encompassing both trust in God and in interpersonal relations. In Islamic context, referring trust as trustworthiness is a key virtue in Islam, where fulfilling promises and being honest are highly valued. The Prophet Muhammad said, "*When a man tells something and then goes away, it is a trust*" (Bukhari, n.d., Book of Trust, Hadith 6130). This ethical stance underpins the importance of reliability and integrity in all dealings, promoting a culture of trust and accountability within society (Khan, 2019).

Lastly, **compassion** promotes high moral standards and kindness, urging individuals and communities to go beyond simply observing the rules and strive for ethical perfection. Compassion is a notion derived from Islamic teachings about helping others and working together. According to Al-Qaradawi (2009), it is necessary in Islam to support the needy, which can be accomplished for instance through *zakat*, *waqf*, *sadaqah*, or other voluntary contributions. Compassion can be added to the *Tawhidic*, which holds that individuals and groups should adhere to high moral standards and holy principles in all that they undertake (Sardar, 2018; Naqvi, 1994). This relationship ensures that corporate practices not only adhere to moral principles, but also strive for perfection in accordance with divine values. Thus, compassion represents the highest level of ethical conduct in Islam, characterized by kindness and benevolence. The Quran

instructs Muslims to act with compassion towards all of creation: "And We have certainly created man, and We know what his soul whispers to him. And We are closer to him than [his] jugular vein" (Quran 50:16). This value emphasizes the importance of empathy and altruism, guiding individuals to act with mercy and understanding in their interactions with others (Hassan, 2022).

As a result, Islamic values serve as the foundation and integration to Madani concept which applicable to the corporate governance, entire businesses and institutions. These ideals are reflected in Malaysian government programs that integrate Islamic principles with contemporary governance to cultivate a fair and equitable society (Jabatan Kemajuan Islam Malaysia, 2020).

Islamic Business Ethics

Islamic business ethics are built on fundamental beliefs that teach people how to behave morally in business. The objectives of *Maqasid al-Shariah* are a major principle that ensures business operations are consistent with Shariah's greater purposes, which include promoting and defending important human values like religion, life, intelligence, family, and property (Al-Raysuni, 2018; Kamali, 2008). This strategy ensures that environmental responsibility is viewed as part of a larger purpose of keeping people and things safe. In accordance with the basic aims of Islamic law, this framework instructs businesses on how to act in ways that promote fairness, justice, and welfare. Another important concept is the *Maslahah* in considering the public interest and community's well-being when making economic decisions. The purpose of social well-being is to enhance the common good by implementing policies that address social inequality and support the disadvantaged (Rashid, 2017). *Maslahah* assists businesses in avoiding actions that may harm society or undermine social justice by prioritizing what is best for everyone.

The *Tawhidic* concept of God's oneness is also central to Islamic economic ethics. According to Sardar (2018), all behaviors, including business practices, must be consistent with God's principles and oneness. This paradigm employs religious principles in business to ensure that behaviors are honest, fair, and moral. This has been supported by Siddiqui (2019), mentioned similarly that this principle not only emphasizes monotheism but also influences all aspects of a Muslim's life, including business practices, and should be performed with the awareness that one is ultimately accountable to God. This perspective encourages Muslims to conduct their business with integrity, transparency, and a sense of moral responsibility. According to the *Tawhidic* viewpoint, doing business ethically entails more than just respecting the law; it also demonstrates one's faith and adherence to divine principles.

This idea of *Maqasid al-Shariah*, *Maslahah*, and the *Tawhidic* paradigm combine to form an overarching moral framework that guides Islamic commercial activities and aligns them with both personal and social ideals. Integrating the Madani concept with the Islamic values enhances their usefulness and applicability in daily life. The Madani core values bear a close resemblance to other fundamental Islamic moral goals, all aimed

at achieving fairness and impartiality in all interactions and decisions, ensuring equitable enforcement of the law and protection of everyone's rights (Rashid, 2017).

Marketing Practices in Islam

In the Islamic setting, ethical marketing is founded on values that assure fairness and honesty in corporate processes. This paradigm is based on key values like honesty, transparency, and respect for consumer rights. Honesty (*sidq*) is a basic concept in Islamic marketing, requiring organizations to make accurate promises and avoid deceptive techniques (Hamid, 2016). This approach ensures that marketing messages are accurate and reliable, which promotes trust and credibility. Likewise, transparency in marketing entails communicating clearly and openly about products and services, including their features, pricing, and potential hazards. This approach is consistent with the Islamic value of avoiding undue ambiguity (*gharar*), which is prohibited in trade (Hassan, 2015). After all, businesses should respect consumers' rights by giving accurate and honest information, allowing them to make educated judgments.

Respect for consumer rights means acknowledging and protecting consumers' rights, particularly their entitlement to fair treatment and accurate information. The Islamic tenet of justice (*adl*), which mandates fair dealings and the respect of individuals' rights in all transactions, supports this concept (Khan, 2018). Islamic values-based ethical marketing strategies guarantee the treatment of customers with dignity and the protection of their interests. These qualities, taken together, provide a solid framework for ethical marketing in Islam, supporting justice, integrity, and respect in commercial dealings. The extant literature on sustainability and relationship marketing from an Islamic perspective demonstrates how Islamic principles can improve and develop these concepts in corporate operations. Ahmad and Rashid (2019) highlighted in their study, how Islamic sustainability values coincide with goals for reducing environmental harm and responsible resource use, thus promoting long-term ecological balance and societal welfare.

Islamic relationship marketing is shaped by ideals like trust, honesty, and mutual respect. In their study, Al-Hashimi and Hassan (2019) examined the impact of Islamic principles on relationship marketing. They discovered that in Islam, relationship marketing involves establishing enduring and reliable connections with clients, while placing a strong emphasis on ethical conduct, transparency, and the protection of consumer rights. The findings suggested that adhering to these values not only increases consumer loyalty but also improves brand reputation and business performance in accordance with Islamic ethical ideals. Hence, it has proven that incorporating Islamic values into sustainability and relationship marketing can result in ethical and socially responsible business operations that align with the larger ideals of Islamic business ethics.

METHODOLOGY

This study is a conceptual research paper. The research data collection method is based on the literature review from existing data and secondary sources, which analyzes previous and recent reports and studies on the Madani concept, Islamic business ethics, and marketing practices in Islam. Sources of information and data are obtained from books, e-books, journals, Al-Quran, hadith, and official reports through official websites such as the website of the Malaysian Madani, Kementerian Perpaduan Negara, and Jabatan Kemajuan Islam Malaysia (JAKIM).

RESULTS AND DISCUSSIONS

The findings of this study are discussed based on the secondary data collection of this study concerning the practical implications of the Madani concept in relation to Islamic business ethics and contemporary marketing practices. Challenges and limitations of the study have also been highlighted for future reference studies.

Practical Implications

The Madani concept should be embedded and systematically integrated into Islamic business ethics and contemporary marketing practices. The core values of Madani concept, including sustainability, prosperity, innovation, respect, trust, and compassion are relevant and applicable in the business context, particularly in strategies and strengthening the business model. On the other hand, by incorporating the Madani idea into the Islamic setting, such as justice, trustworthiness, and wellbeing can shape the business ethical behavior and marketing application to be served as working culture and practicality in business conduct.

This study offers practical recommendations to the regulator to utilize both the Madani concept and Islamic values as guiding principles in managing any ministry, department, institutions as well as business across numerous sectors. The guidelines that apply to any system should be effectively communicated through various media platforms and carefully designed to serve as a reliable reference for specific needs, especially in the context of corporate governance and businesses. Meanwhile, businesses can capitalize on this opportunity to adopt ethical and marketing practices based on Islamic values, particularly Muslim entrepreneurs. Ultimately, this study can serve as a foundation for further research and useful resources to develop a standard for corporate governance, administrative and business purposes.

Implications for Islamic Business Ethics

Integrating Madani concept into the ethical framework of Islamic businesses has the potential to significantly enhance the overall ethical climate. These principles not only align with the core values of Islamic ethics but also address contemporary challenges in business and corporate governance, social responsibility, sustainability, and global market operations. By fostering a culture of ethical resilience, trust, and sustainability, Islamic businesses can position themselves as leaders in ethical business practices,

contributing positively to both their immediate communities and the broader global economy.

Relevance to Contemporary Marketing

The integration of Madani concept into marketing practices offers a robust framework for addressing contemporary challenges such as consumer trust, ethical advertising, and sustainability. By emphasizing trustworthiness, honesty, public well-being and justice, these principles provide a comprehensive ethical guide that can enhance the credibility, transparency, and social responsibility of marketing practices. As businesses increasingly facing demands for ethical and sustainable practices, applying the integration of Madani concept and Islamic business ethics can help them not only meet these expectations but also build stronger, more trust-based relationships with consumers. This, in turn, can lead to long-term success and ethical resilience in the marketplace, resulting in a positive impact on the implementation of marketing strategies.

Challenges and Limitations

While the integration of Madani concept with Islamic business ethics and marketing practices presents significant opportunities for enhancing ethical standards, it also comes with challenges related to cultural and religious disparities, market dynamics, and the need for contextual adaptation. Addressing these challenges requires a nuanced approach that respects local contexts that comprises of various background, adapts ethical principles to market realities, and communicates the value of these concept and principles in a way that resonates with diverse stakeholders. By carefully navigating these challenges, businesses can effectively apply Madani concept with Islamic business ethics in a manner that enhances both their ethical standing and market success.

This study offers valuable insights into the potential of Madani concept to integrate with Islamic business ethics to enhance marketing practices. However, the absence of empirical validation, the challenges of generalization, and the potential for subjective interpretation highlight significant limitations. These limitations underscore the need for future research that incorporates empirical methods to test the study's conceptual framework, explore its applicability across different contexts, and provide practical guidelines for implementation and robust future studies.

CONCLUSION

The study makes significant contributions to the literature by introducing Madani concept with the Islamic business ethics to address contemporary marketing practices. Together with the challenges and limitations will provide a foundation for future empirical research. It enriches the discourse on Islamic ethics in business by offering new insights into how Islamic values can be integrated into Madani concept and modern business practices, particularly in marketing. Additionally, the applicability of this study should emphasize contextual adaptation and cultural sensitivity that highlight the

need for a flexible approach to applying Islamic ethics in diverse business environments, thereby expanding the scope and relevance of Islamic business ethics research.

The study provides a new conceptual lens for understanding the ethical dimensions of business and marketing in Islamic contexts by incorporating Madani concept as a contextually adaptable, and comprehensive framework. This lens shifts the focus from compliance-based ethics to a more proactive and holistic approach, encouraging businesses to lead with integrity, adapt to cultural nuances, and prioritize long-term ethical outcomes. Through this lens, the study not only enriches the existing literature on Islamic business ethics but also offers practical insights of the Madani concept for businesses and marketers seeking to align their practices with Islamic values in a meaningful and contextually relevant way.

REFERENCES

- Ahmad, S., & Rashid, M. (2019). Sustainability in Islamic business ethics: Principles and practices. *Journal of Islamic Marketing*, 10(2), 345-359. <https://doi.org/10.1108/JIMA-02-2018-0026>.
- Ahmad, K., & Rashid, S. (2019). Sustainability and Islamic business ethics. *Journal of Islamic Marketing*, 11(4), 789-803. <https://doi.org/10.1108/JIMA-03-2019-0098>.
- Al-Hashimi, S., & Hassan, R. (2019). Trust and honesty in Islamic relationship marketing. *International Journal of Islamic and Middle Eastern Finance and Management*, 12(4), 468-482. <https://doi.org/10.1108/IMEFM-12-2017-0341>.
- Al-Hashimi, S., & Hassan, R. (2019). Relationship marketing in Islamic context: A review and research agenda. *International Journal of Islamic and Middle Eastern Finance and Management*, 12(1), 46-60. <https://doi.org/10.1108/IMEFM-07-2018-0182>.
- Al-Qaradawi, Y. (2009). *The lawful and the prohibited in Islam*. Islamic Inc.
- Al-Quran: Arabic Text with Corresponding English Meanings* (Sahih International Translation). (2004). Abul-Qasim Publishing House.
- Al-Raysuni, A. (2018). *Maqasid al-Shariah: An introduction*. International Institute of Islamic Thought.
- Amin, M. (2018). Islamic ethics and interpersonal relationships. *Journal of Islamic Studies*, 29(4), 256-270.
- Aziz, N. A., & Rusli, R. (2023). Embracing Islamic values in governance: Reflecting the concept of 'madani' in the Holy Qur'an. *International Journal of Social Science and Education Research Studies*, 03(07). <https://doi.org/10.55677/ijssers/V03I7Y2023-20>.
- Bukhari, M. I. (n.d.). *Sahih Bukhari*. Book of Trust, Hadith 6130. <https://sunnah.com/bukhari/81/119>.

- Ibrahim, M. (2015). *Environmental ethics in Islam*. Islamic Environmental Studies Center.
- Carrington, M., Chatzidakis, A., Goworek, H., & Shaw, D. (2021). Consumption ethics: A review and analysis of future directions for interdisciplinary research. *Journal of Business Ethics*, 168, 215-238.
- Drucker, P. F. (1985). *Innovation and entrepreneurship: Practice and principles*. Harper & Row.
- Hamid, M. A. (2016). The role of honesty in Islamic marketing. *Journal of Islamic Business Studies*, 7(2), 123-136. <https://doi.org/10.1515/jibs-2016-0008>
- Hassan, M. K. (2015). Transparency in Islamic finance: A conceptual framework. *Journal of Financial Services Research*, 47(1), 89-103. <https://doi.org/10.1007/s10693-014-0185-5>.
- Hassan, M. (2022). Compassion and altruism in Islamic teachings. *Islamic Social Sciences Review*, 34(2), 112-130.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations (2nd ed.)*. Sage Publications.
- Ibn Majah, M. Y. (n.d.). *Sunan Ibn Majah*. Book of Knowledge, Hadith 224. <https://sunnah.com/ibnmajah>.
- Jabatan Kemajuan Islam Malaysia. (2020). Integrating Islamic values in National Development. Malaysian Government Printing Office. <https://www.islam.gov.my> (Retrieved on 28 August 2024).
- Kamali, M. H. (2008). *Principles of Islamic jurisprudence*. Islamic Texts Society.
- Kementerian Perpaduan Negara. Membangun Malaysia Madani melalui Konsep Perpaduan dalam Kepelbagaian. <https://www.perpaduan.gov.my/images/2023/dasar/PerpaduanMalaysiaMadani/PerpaduanMalaysiaMadani.pdf>.
- Khalil, A. (2021). Innovation and Islamic ethics: Balancing modernity and tradition. *Islamic Business Journal*, 40(3), 78-94.
- Khan, M. A. (2018). Justice and ethical marketing in Islam. *Journal of Business Ethics*, 152(2), 405-418. <https://doi.org/10.1007/s10551-016-3317-0>.
- Khan, M. (2019). Trustworthiness in Islam: Principles and practices. *Journal of Islamic Ethics*, 18(1), 45-59.
- Khan, M. (2020). Economic prosperity and justice in Islam. *Journal of Islamic Economics*, 22(1), 34-49.
- Madani, R. A. (2016). Islamization of **science**. *International Journal of Islamic Thought*, 9. <https://doi.org/10.24035/ijit.9.2016.006>.
- Malaysian Madani. <https://malaysiamadani.gov.my/> (Retrieved on 28 August 2024).
- Mirakhor, A., Iqbal, Z., & Sadr, S. K. (Eds.). (2020). *Handbook of ethics of Islamic economics*

and finance (Vol. 5). Walter de Gruyter GmbH & Co KG.

Nasr, S. H. (2002). *The Islamic worldview*. Islamic Publications.

Niaz, M. (2020). Integrating Islamic principles into modern business practices. *International Journal of Business Ethics*, 15(1), 75-89.

Pew Research Center. (2021). The Future of World Religions: Population Growth Projections, 2010-2050. <https://www.pewresearch.org/religion/2015/04/02/religious-projections-2010-2050/> (Retrieved on 28 August 2024).

Putnam, R. D. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.

Sardar, Z. (2018). *Islamic values and modernity: A philosophical analysis*. Routledge.

Rashid, M. (2017). The principle of Maslahah in Islamic law: An overview. *Islamic Law and Society*, 24(2), 185-204.

Siddiqui, N. (2019). Sustainability and stewardship in Islam. *Environmental Ethics Journal*, 28(3), 203-215.

Siddiqui, M. N. (2019). Tawhidic paradigm and its application in Islamic business ethics. *Journal of Islamic Business Studies*, 31(2), 123-139.

THE IMPLEMENTATION OF MUSLIM-FRIENDLY STANDARD, MAQASID SHARIAH AND MADANI PRINCIPLES: A PRELIMINARY EMPIRICAL SURVEY

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Abstract

Malaysia is one of the travel destination that Muslim visitors from other countries choose to visit. If domestic or foreign tourists are visiting Malaysia, they will undoubtedly seek a location to stay that is accommodating to Muslims and that prioritises surau, qibla direction indicators, and cleanliness among others. Hence, this paper investigate the implementation of Muslim-Friendly Hotel Standard among hotels and accomodation in Malaysia which should be in line with Maqasid Shariah elements and MADANI Principles. The data for empirical analysis are collected through online survey and the methodology employed is descriptive analysis. The findings indicate that based on the criteria instruments that have been developed, there is in line implementation of Muslim-Friendly Hotel Standard with certain Maqasid Al-Shariah elements; particularly related to protection of faith or religion (din) and protection of life (nafs); and MADANI Principles especially in the context of Ihsan; to ensure the well-being of the visiotrs. These criteria or instruments developed include questionnaires related to providing of halal foods, cleanliness of dining area, safety, surau facilities and qibla directions by the hotels or accomodations. This paper further suggest the need for future researchs to identify the implementation of the other standards criteria which should be in line with the Maqasid Shariah elements and the other MADANI Principles to ensure the well-being of the ummah.

Keywords: Muslim-Friendly Hotel Standard, , Maqasid Shariah Elements, MADANI Principles, Descriptive Analysis

INTRODUCTION

Muslim friendly hotel is a fast-growing product of tourism industry in Malaysia. With the Muslim population estimated to reach 2 billion worldwide, the market value of Muslim tourism worldwide would reaches approximately USD194 billion in 2024 and will continue to grow and reach USD300 billion in 2026.

According to the Global Muslim Tourism Index report (GMTI, 2023), Malaysia has received the 'Best Muslim-Friendly Destination' award of the Organization of Islamic Cooperation (OIC). The data shows a total of 2.12 million Muslim tourists came to Malaysia in 2022 with a total Muslim tourist spending of RM5.37 billion.

As such, Malaysia needs to strengthen efforts in improving the accessibility of Muslim-friendly tourism infrastructure. These include development and improvement of airports, ports, public transport networks, as well as the provision

of accommodation facilities quality with Muslim-friendly facilities is essential to meet the needs of Muslim tourists.

One of the crucial aspect is for hotels and accommodation to follow the standard and provide facilities such as prayer rooms, toilets, clear qibla, as well as halal food to meet the needs of Muslim tourists. Tour company operators are also encouraged to participate in courses and programmes such as the 'Muslim-Friendly Tourist Guide' (MFTG) course and the 'Muslim-Friendly Tourism and Hospitality Assurance and Recognition' (MFAR) program to improve Muslim-friendly tourism skills.

To date, there is no specific standard that can be used as a benchmark for Muslim tourism including Muslim-friendly hotels (Organisation of Islamic Cooperation 2018;Junaidi 2020). However, the Department of Standards Malaysia had introduced MS 2610: 2015 Muslim Friendly Hospitality Services – Requirements as the benchmark for Muslim-friendly hotels. Meanwhile a private agency known as Tripez Travel offers *Salam Standard* as Muslim-friendly hotel rating system. Salam Standard gets recognition by the government through the Ministry of Tourism and Culture Malaysia (MOTAC) and Islamic Tourism Centre (ITC).

Another private agency based in Singapore known as Crescentrating Pte Ltd. also offers halal-travel-friendly rating and accreditation **services** including Muslim-friendly hotels. Crescentrating in collaboration with Mastercard has produced an index called Global Muslim Travel Index (GMTI) which is the most authoritative reference in the Muslim-friendly halal tourism segment. These agencies offer different standards of Muslim-friendly hotels.

Muslim-Friendly Hotel Standard

According to a study by Hussain, Jamaluddin and Hashim (2021), a Muslim-friendly hotel is a hotel that provides services that are in accordance with the Islamic principles and teaching. In their analysis they outlined some of the elements that make a hotel Muslim-friendly such as halal food and beverages, prayer facilities, segregation of facilities between men and women, safety security, and appropriate dress code for employees among many others. Their findings show that several hotels in Malaysia that have adopted the Muslim-friendly hotel concept includes De Palma Hotel and Grand BlueWave Hotel in Selangor and the Waterfront Hotel and Hilton Kuching in Sarawak. These hotel offer various Islamic amenities and services such as prayers mats, Qibla direction, Quran, Halal-Certified restaurants, separate swimming pools and spas, and Islamic banking facilities.

MS 2610: 2015 Standard

MS 2610: 2015 does not only apply to accommodation, but it also includes tour packages and tour guides. The accommodation standard includes five main components, namely: rooms, food and beverages, public musolla, public toilets, health and recreational facilities. These components are shown in Table 1.

Table 1: Accommodation-Related Components in MS Standard:2610:2015

Components	Condition
Room	- clean, enable the implementation of ablution and prayer, ease of purification according to syarak, no alcoholic or intoxicating food provided, provide items such as prayer mats, telekung and al-Quran upon request
Food & Beverages	- kitchens received halal certification by an authoritative body, provide information and services throughout the month of Ramadan including iftar and suhoor.
Public Musolla	- clean, has a good ventilation system and is well maintained, located in a suitable location with signage, have basic information regarding the qibla direction signs, telekung, provide prayer mats and ablution rooms that are separated between men and women.
Public Toilet	- clean, allow Muslim consumers to purify according to syarak including providing items need for purification.
Health and Recreational Facilities	- clean and well organized, toilets provided allow Muslim users to purify according to syarak, the property must provide Muslim-friendly facilities (if necessary).

Salam Standard

Meanwhile, *Salam Standard* divides the Muslim-friendly hotel category into four categories. These categories are shown in Table 2

Table 2: Salam Standard Criteria

Category	Criteria
Bronze	- 100% of rooms contain bathroom or toilet - Providing prayer mats or upon request - Qibla direction signs are available in the room or ready to show the qibla direction upon request
Silver	- Met all criteria in the Bronze category added with: - List of halal restaurants around the hotel available in the room (or can be requested to be provided) - No alcoholic beverages in the room mini-bar (or may be requested to be removed before the customer arrives)
Gold	- Met all criteria in the Bronze and Silver categories added with: - Offer food that has obtained halal certification (breakfast and/or room service) certification by a local certification body that accredited (e.g. in Malaysia certification by JAKIM)
Platinum	- Met all criteria in the Bronze, Silver and Gold categories added with - The entire hotel premises are free of alcoholic beverages.

Crescent Rating Standard

Crescent Rating Standard have develop several criteria for the guideline and reference. These criteria include the halal food condition, the prayer condition, the service during Ramadhan (fasting) and the freedom from non-halal activities in hotels. These criteria are shown in Table 3.

Table 3: Crescentrating Standard Criteria

Halal Food Criteria	Prayer Criteria	Service during Ramadhan	Freedom from Non-halal Activities
1. List of halal restaurants in the surrounding area?	1. List of mosques in the surrounding area?	1. Basic necessities for breaking the fast (water and dates)?	1. Are there nightclubs or casinos?
2. Food or halal menu?	2. Prepared to answer questions regarding prayer times and Qibla directions?	2. Iftar dishes during Ramadan?	2. Are there non-halal activities or adultery television network?
3. Halal food in Mini-bar?	3. Is Mushaf al-Quran, prayer mats or prayer time schedule provided?	3. Iftar and suhoor dishes throughout Ramadan?	3. Are spa and swimming pool separate etween genders?
4. Does the kitchen get halal certification?	4. Qibla direction sign in the room?	4. Halal food service in the room? Halal restaurants around the hotel?	4. Is the spas, swimming pools and gymnasiums exclusively for women?
5. All halal certified restaurants	5. All facilities for every Muslim resident to pray.	5. Iftar and suhoor meals during Ramadan and transportation to the mosque?	
6. Only halal food is allowed at the hotel			

Muslim-friendly hotel standard according to the *Maqasid Al-Shariah* Perspective

In a study by Yahaya, Samsudin and Kashim (2020) regarding analysis on Muslim-friendly hotel standard according to the *Maqasid Al-Shariah* Perspective. They tried to determine which among the standards practice by the hotels comply with the five elements in *Maqasid Al-Shariah*. The findings reveal that the standards referred to in

Muslim-friendly hotel offerings in Malaysia which include MS2610: 2015 Muslim Friendly Hospitality Services–Requirements, Crescentrating Standard and *Salam Standard* are not holistic in *Maqasid's* perspective. Safety of life and property is not used as an essential element in the assessment offered. The situation is not in line with the hotel's function as a place for protection and totally contradicts with the main kulliyat of *Maqasid Al-Shariah*. These shortcomings are shown in Table 4

Table 4: Standard MS2610: 2015, Crescentrating Standard dan *Salam Standard* Based on Kulliyat Maqasid Al-Shariah

Kulliyat Maqasid Al-Shariah	Prasarana Berkaitan	MS2610:2015	Crescentrating Standard	Salam Standard
Penjagaan Agama (din).	Solat: sejadah, telekung, arah qiblat, jadual solat, musolla	/	/	/
	Puasa: iftar dan sahur	/	/	X
	Prasarana wuduk dan mandi wajib	/	/	/
	Prasarana menyuci najis	/	/	X
	Solat Jumaat: informasi berkenaan masjid berhampiran	X	/	X
	Tiada kitab suci selain al-Quran di dalam bilik	X	X	X
	Dekorasi bilik tidak bercangah dengan kepercayaan Islam	X	X	X
	Dekorasi hotel tidak bercangah dengan kepercayaan Islam	X	X	X
Penjagaan Nyawa (nafs)	Makanan dan minuman halal	/	/	/
	Restoran diiktiraf halal	/	/	/
	Ruangan riadah: seperti gimnasium, kolam renang	/	/	X
	Bersih: bilik dan kawasan hotel	/	/	/
	Kawalan keselamatan: seperti pengawal, cctv	X	X	X
	Kawalan kebakaran: seperti alat pengesan dan pemadam api	X	X	X
	Kawalan situasi kecemasan: seperti <i>sop</i> dan staf terlatih	X	X	X
	Larangan merokok	X	X	X
Penjagaan Akal ('aql)	Memperbanyakkan rancangan tv berinformatif	X	X	X
	Menyediakan ruangan bacaan	X	X	X
	Tidak menyediakan minuman beralkohol: restoran, kafe dan <i>mini-bar</i>	/	Pentafsiran berdasarkan terma "makanan dan minuman halal"	/

	Larangan memasukkan minuman beralkohol	/	Pentafsiran berdasarkan terma “makanan dan minuman halal”	/
Penjagaan Keturunan (<i>nasl</i>),	Melarang pasangan tidak berkahwin berkongsi bilik	X	X	X
	Memisahkan ruang atau jadual penggunaan kolam renang, gimnasium dan spa berdasarkan jantina	/	/	/
	Bebas daripada pakej rekreasi dan permainan yang menggalakkan pergaulan bebas	X	X	X
	Bebas daripada hiburan melalaikan	X	/	X
Penjagaan Harta (<i>mal</i>)	Kotak keselamatan di dalam bilik	X	X	X
	Bilik kebal	X	X	X
	Rondaan berkala	X	X	X
	Kawalan pintu masuk	X	X	X
	Lif beroperasi menggunakan kad	X	X	X

Sources: Yahaya, Samsudin and Kashim (2020)

Furthermore, in another study by Aziz and Yahaya (2021) that review past researches regarding these Muslim friendly hotel rating systems whether they have meet *Maqasid Al-Shariah* guidelines. The study employed qualitative research with content analysis design where all data are gathered from literature review including articles and documents about Muslim friendly hotel rating systems as well as interview session with a few informants related to the tourism industry. The findings indicates that all the rating’s standards do not completely accomplish *Syariah* objectives in full filling Muslim tourists’ needs. Protection of live and property are not the requisite elements in their inspections and it is opposites to the hotel’s function as protection. The study conclude that the standards that is being used must adhere firmly to *Maqasid Al-Shariah* principles to ensure a holistic Muslim friendly hotel rating could be remain.

MADANI Principles in the Tourism and Hospitality Industry

Islam's core values provide a complete framework that strikes a balance between spiritual, moral, and socioeconomic aspects in the context of contemporary nation-building and governance. Throughout history, wealthy and just communities have been established by applying these principles, which are taken from the teachings of the Quran, Hadith, and the deeds of the Prophet Muhammad (PBUH). The "Madani Principles" are one of these that stands out as a fundamental manual. From the time of the Prophet Muhammad's (PBUH) rule in Madinah, these ideas have persisted to be very important for the advancement of Muslim nations to this day. With an

emphasis on social fairness, economic growth, education, and governance, this essay investigates how Madani ideals might be applied to support a Muslim nation's all-around development.

Islam offers a comprehensive framework that balances spiritual, moral, and socioeconomic components. The Madani principles offered in Malaysia's framework are comparable to those of Islam. These precepts are drawn from the hadith, the Quran, and the teachings of the Prophet Muhammad (PUBH). One of the key industries that greatly contributes to economic development is tourism and hospitality. For a Muslim nation to foster an environment that is both economically and spiritually uplifting as well as socially responsible, tourism and hospitality practices must be in line with Islamic beliefs and principles.

One of the fundamental Madani principles related to Muslim-Friendly hotel or hospitality industry is the idea of *Ihsan* (excellence and compassion) (Malaysia, 2024). It inspires Muslims to carry out their responsibilities with the utmost sincerity and to pursue perfection in all spheres of life, including business. *Ihsan* can be understood in the context of hospitality and tourism as offering high-quality services with a focus on the happiness and well-being of visitors. This idea pushes companies to prioritize fostering a friendly and courteous environment for all guests over just generating a profit. In actuality, this can entail providing services that respect Islamic principles and are attentive to cultural differences. For instance, in nations where Muslims predominate, hotels and restaurants may offer halal cuisine, prayer areas, and staff attire guidelines that are modest. These customs serve not just Muslim visitors but also non-muslim visitors who seek to respect the local culture.

Another important Madani principle is the emphasis on social justice and community welfare. Corporate social responsibility (CSR) initiatives that assist local communities are one way that the tourist and hospitality sectors can put this philosophy into practice. Businesses in the tourism industry can take actions to guarantee that the local populace benefits equally from the tourism industry's economic benefits. This could entail employing locals, obtaining products and services from regional vendors, and funding infrastructure, healthcare, and education projects as well as other community development initiatives. By doing so, these business not only contribute to the well-being of the community but also create a more authentic and enriching experience for tourists, who can engage with the local culture and traditions in a meaningful ways. Additionally, the principles of *shura*(consultation) can be applied by involving local communities in decision making processes related to tourism development. This ensures that tourism projects are aligned with the needs and values of the community and helps to prevent negative impacts such as cultural erosion or environmental degradation.

METHODOLOGY

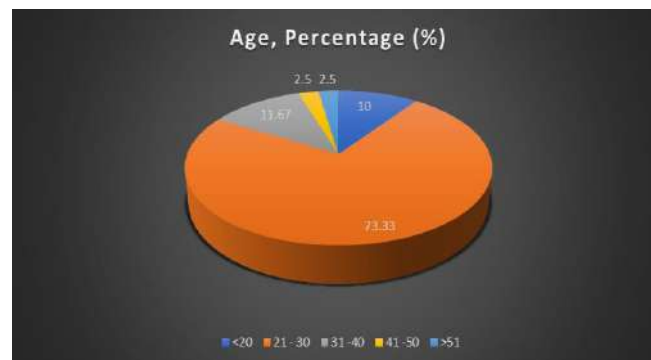
In order to examine the implementation of Muslim-friendly Standard, this paper employ descriptive analysis for demographic and customer's perception. Several criteria from the Muslim-friendly hotel standards as mentioned above were selected

and develop as instruments for online survey. The selection of only these criteria were made as preliminary analysis. Further selection of the other criteria will be made depending on the preliminary finding and interest of the future research. The selected criteria include safety, qibla direction, surau facilities or space for praying, *Mushaf al-quran*, prayer mat and prayer time schedule, food serving and cleanliness of dining area, entertainment and broadcasts content and room amenities, cleanliness and housekeeping services.

RESULTS AND DISCUSSION

Demographic Findings

Preliminary findings for perception on Muslim-friendly halal include demographic analysis. Figure 1 shows the age group of 120 respondents who have participated in the survey.



Source: online survey

Figure 1: Age of Respondent

According to figure 1, 73.33% of the respondents age between 21 to 30 years old, followed by 11.67% age between 31 to 40 years old, meanwhile 10% of the respondents age less than 20 years old and 2.5% age between 41 to 50 years old and above 50 years old, respectively.

Another demographic finding shows the result of 120 respondents distribution across 14 states in Malaysia. Table 5 shows this data.

Table 5: Respondents by State

State	Respondent	State	Respondent
Perlis	1	Selangor	39
Kelantan	10	Negeri Sembilan	5
Terengganu	3	Melaka	2
Kedah	24	Johor	13
Pulau Pinang	7	Sabah	1
Perak	10	Sarawak	0
Pahang	4	Wilayah Persekutuan	1

Source: online survey

A descriptive analysis showing customers perception regarding criteria offer by Muslim friendly hotel is shown in Table 6. According to the result in Table 6, 75 percent of the respondents are satisfied and very satisfied with food serving and cleanliness of the dining area, followed by 73.4 percent respondents are satisfied and very satisfied with the surau and qibla direction. Meanwhile, 73.3 percent of the respondents are satisfied and very satisfied with hotels providing mushaf al-quran, prayer mats & prayer time schedule. The result also show that 70 percent of the respondents are satisfied and very satisfied with the safety, room amenities, cleanliness and housekeeping services of the hotels, respectively.

Table 6: Customers Perception towards the Standard Criteria Facilities provided by the Muslim-Friendly Hotels in Malaysia

Standard Criteria Facilities	Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
Check-in process, hospitality, dress and appearance	4 (3.5)	6 (5.0)	42 (35.0)	45 (37.5)	23 (19.0)
safety – security control, cctv camera and no smoking signage	2 (1.7)	9 (7.5)	25 (20.8)	33 (27.5)	51 (42.5)
Room amenities, cleanliness and housekeeping services	2 (1.7)	9 (7.5)	25 (20.8)	53 (44.2)	31 (25.8)
entertainment content and broadcasts – content	8 (6.7)	12 (10.0)	46 (38.3)	25 (20.8)	29 (24.2)
Food serving and cleanliness of dining area	4 (3.3)	6 (5.0)	20 (16.7)	46 (38.3)	44 (36.7)
Surau and qibla direction	3 (2.5)	4 (3.3)	25 (20.8)	41 (34.2)	47 (39.2)
Mushaf al-quran, prayer mats & prayer time schedule	3 (2.5)	9 (7.5)	20 (16.7)	25 (20.8)	63 (52.5)

Note: Total 120 respondents; Percentage value in parenthesis

CONCLUSION

The findings indicate that the customers are satisfied with the selected standard criteria provided by the Muslim-friendly hotel that they have visited. These standard criteria facilities include safety, room cleanliness, surau and qibla directions and prayer mat provided. The result shows that 75% respondents are more than satisfied with the food serving and cleanliness of the dining area. While, 70% respondents are more than satisfied with the security control, cctv camera, no smoking signage facilities and room amenities, cleanliness and housekeeping services provided by the hotel. These findings are according to the standard comparison highlighted by Yahaya, Samsudin and Kashim (2020). According to their analysis the standard establish through halal food serving, cleanliness of the dining area, room cleanliness and safety are compulsory to addressed the protection of life (*nafs*) which is the second *Maqasid Al-Shariah* elements. These criteria is crucial and are outlined in all the standards. These findings are also inlined with the MADANI principles *al-Ihsan*; where the hotel providers are encourage to provide facilities that cover the protection, hapiness and well-being of their visitors.

Finding also indicate that approximately 73 % respondents are more than satisfied with Surau and *qibla* direction and prayer mat and prayer time schedule facilities provided. The criteria such as providing prayer mat, *qibla* direction, prayer schedule and surau are also highlighted in all standards. This is also inlined with the first *Maqasid Al-Shariah* element which is the protection of faith or religion (*din*) and also the idea of *Ihsan*; well-being as outline in the MADANI principles.

Future study should focus on other elements or criteria such as highlighted by all the Standard, *Maqasid Al-Shariah* and also the others principles outlined in MADANI framework. Detail criteria; as outline by Cresentrating Standard; which includes kitchen halal certificate, meal to break fasting and for *sahur* during *Ramadhan*, transportation from hotel to the mosque, nearest mosque direction, recreational infrastructure and health among others should be examine. The selection of the future criteria need to be wisely determine so that the analysis can improve the standard of quality of the five elements of *Maqasid Al-Shariah*; protection of faith or religion (*din*), life (*nafs*), lineage (*nasl*), intellect (*'aql*) and property (*mal*) and also to addressed the MADANI principles which have been outline by the government. In order to have a clearer picture of the implementation, the survey also should be conducted at a more specific level which is by looking at the state individually.

REFERENCE

- Aziz Abidin Azmi Puat, & Mohammad Zaini Yahaya, (2021). Standard penarafan hotel mesra Muslim berdasarkan maqasid syariah : satu sorotan. *Journal of Contemporary Islamic Law*, 6 (2). 76-85.
- Crescent Rating. (2024). [World's Leading Authority on Halal Travel – CrescentRating](#)
- Faridah Hj. Hassan, Siti Aisah Yusop, Fatin Lina Amirah Mohd Idris, Muhammad Izrin Hani bin Mohd Rani & Santi Rahmawati. (2023). Halal Tourism Industry: Advantages and Challenges in Malaysia. *International Journal of Emerging Issues in Islamic Studies (IJEIIS)*, 3 (1). <https://doi.org/10.31098/ijeis.v3i1.1683>. 117–129
- Hussain, Jamaluddin and Hashim. (2021). Study on Muslim-Friendly Hotel in Malaysia: A Conceptual Framework. *Journal of Halal Industry & Services*. 4(1). 1-19
- Karim, M. H., Ahmad, R., & Zainol, N. A. (2017). Differences in Hotel Attributes: Islamic Hotel and Sharia Compliant Hotel in Malaysia. *Journal of Global Business and Social Entrepreneurship (GBSE)*, 1(2), 157-169.
- Malaysia. (2024) Department of Standard Malaysia [Department of Standards Malaysia - Home \(jsm.gov.my\)](#)
- Malaysia. (2024). Pelan Induk Industri Halal 2030 lonjak Malaysia peneraju global. Pejabat Perdana Menteri. Blog Malaysia Madani. [Pelan Induk Industri Halal 2030 lonjak Malaysia peneraju global - Malaysia MADANI](#)
- Malaysia. (2024). Pelan Induk Industri Halal 2030 lonjak Malaysia peneraju global. Pejabat Perdana Menteri. Blog Malaysia Madani. [Ekonomi MADANI - Malaysia MADANI](#)
- Malaysia. (2024). The world's leading Halal hub As a progressive Muslim country with consistent economic development. Islamic Tourism Centre. [Malaysia – The world's leading Halal hub – Islamic Tourism Centre \(itc.gov.my\)](#)
- Malaysia. (2023). Malaysia Madani framework ideal vehicle to realise nation's global halal ambitions. <https://twentytwo13.my/malaysia-madani-framework-ideal-vehicle-to-realise-nations-global-halal-ambitions/>
- Malaysia. (2023). *The Government of Malaysia's Official Portal*. Malaysia.gov.my. <https://www.malaysia.gov.my/portal/content/30466>
- Md Siddique E Azam, Moha Asri Abdullah & Dzuljastri Abdul Razak. (2019). Halal Tourism: Definition, Justification, and Scopes Towards Sustainable Development. *International Journal of Business, Economics and Law*, 18, 23-31

- Mohammad Hashim Kamali . (2012). Tourism and the Halal Industry: A Global Shariah Perspective. ResearchGate. [\(2\) Tourism and the Halal Industry: A Global Shari'ah Perspective \(researchgate.net\)](#)
- Mohammad Zaini Yahaya, Muhammad Adib Samsudin & Mohd Izhar Ariff Mohd Kashim (2020). An Analysis of Muslim Friendly Hotel Standards in Malaysia According to the Maqasid Syariah Perspective. . *International Journal of Islamic Thought*, 18, 1-53.
- Nair, M., & Pandit, A. (2016). Customer Satisfaction in the Malaysian Hotel Industry: An Analysis Using Online Reviews. *International Journal of Marketing Studies*, 8(2), 118-133. doi:10.5539/ijms.v8n2p118
- Nur Iman Hashim, & Mohd, N. (2022, March). Muslim-Friendly Hotel In Malaysia: The Development, Operating Concept, and Associated Issues. https://www.researchgate.net/publication/358967651_Muslim-Friendly_Hotel_In_Malaysia_The_Development_Operating_Concept_and_Associated_Issues
- Tripfez Travel. (2024). [Tripfez Travel | Muslim-Friendly Tour Packages & Holidays | Licensed Travel Agency](#)

MIRROR MIRROR ON THE WALL: WHICH FORM OF CORPORATE HEDGING ACTUALLY MATTERS IN MALAYSIA OF ALL?

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Abstract

The paper aims to examine the extent and impact of operational and financial hedging practices towards currency exposure among multinationals companies in Malaysia. The study provides a base for Malaysian firms in implementing the appropriate hedging strategy in their risk management structure. Findings from the study are aimed to prompt firms to conduct more in-depth study on the actual effect of their current hedging practice for profit maximisation purpose. The paper used combination of manually collected and publicly available data covering a period of 21 years (1995 - 2016). Initially, the study analysed the data to show the impact of currency movements towards the selected firms' stock returns. In the second stage of the analysis, the data were further analysed to identify the significance of the respective hedging forms, individually and simultaneously, in managing the level of currency exposure. The paper provides empirical insights about how the selected firms' stock returns were affected by the currency movements. The preliminary findings accentuate the cruciality to identify the actual effect of different hedging forms. True to the initial expectations, the effects of the hedging forms were different as the effect of financial hedging was significant while the operational hedging exerts insignificant effect. In fact, incorporating these hedging practices was found to diminish the benefit of the financial hedging in alleviating the currency exposure level. Due to the vast data span, the research may lack of generalisability as it mainly focuses on one market. Future researchers are encouraged to expand the analysis to other markets with similar economic and financial attributes. The paper carries crucial practical implications to the Malaysian non-financial firms because the effects of hedging practices sit differently in the market. The firms need to analyse the specific effect from each hedging practice in order to ensure efficient risk management frameworks within the firm's financial structure. This paper fulfils the need for the market to ascertain the specific effects stemming from different hedging practices at firm-specific analysis.

Keywords: *Currency exposure, corporate hedging, financial hedging, operational hedging, currency movements*

INTRODUCTION

Hedging is a form of investment strategy that is often practised by market participants to offset a particular risk that they face. Hence, firms would choose a hedging position that neutralises the risk and exposure as much as possible (Hull, 2012). Given the robustness of currency movements, it is thus crucial to ascertain the level of currency exposure in order to implement suitable investment practice while simultaneously shield from unexpected exposure. Even though exposure is unavoidable in running corporations, investors always strive to reap maximum profit while minimising the exposure; which is attainable through hedging. According to the theory of hedging by Smith and Stulz (1985), hedging increases the firm value by eliminating any probable claim that affect the company's cash flow. Hedging strategy may also offset any loss or gain of the currency. Exchange rate risk has become one of the most hedged corporate exposure in order to offset the potential loss and gain (Yip & Nguyen, 2012).

Advanced market has shown comparatively lower currency exposure due to the existence of numerous hedging strategies and tools in the market to alleviate the impact of the exposure. Cash flow smoothening in the presence of hedging derivative also improves the probability of internal funding for future investment projects especially when the access to external financing becomes costly. However, developing market does not fully utilise the derivatives and make use of the benefits of derivative hedging. Derivative practice in developing market is low despite the comparatively high exposure level in the market. This is illustrated by the low turnover level of over-the-counter (OTC) foreign exchange instruments in Malaysia by the Triennial Survey in 2016. As shown in Table 1, Malaysia accounts only USD 8 billion turnover, in comparison to USD 1,272 billion of the US and USD 2,406 billion of the UK. The neighbouring Singapore records USD 517 billion of turnover, an expected figure considering the country's position as a developed country.

Table 1: Over-the-counter Foreign Exchange Instruments Turnover in Malaysia, Singapore, the United States and the United Kingdom, 2016.

Country	Turnover of OTC Foreign Exchange Instrument
Malaysia	USD 8 billion
Singapore	USD 517 billion
The US	USD 1,272 billion
The UK	USD 2,406 billion

On the other hand, a closer example is the composition of unhedged and hedged firms using foreign currency derivative (FCD) in Malaysia as shown in Table 2. The percentage of hedged firms increased from 5.314% in 1995 to 33.816% in 2016 while the composition of unhedged firms decreased from 94.686% in 1995 to 66.184% in 2016. Despite the higher incidence of currency exposure in developing market, majority of the sample firms were not hedged by financial derivative. In fact, most of the firms resorted to natural hedging rather than employing the derivative for hedging purpose. The study is aware of the limitation of currency futures and options' contracts in the country and Malaysian firms solely depend on over-the-counter forwards and options (Chong et al., 2014). The low level of financial hedging activity in the country raises the question on the exact potential of financial hedging in alleviating the exposure effect towards the Malaysian firms.

Table 2: Composition of Hedged and Unhedged Firms of the Sample Non-financial Firms in Malaysia, 1995-2016

Year	Hedged Firms		Unhedged Firms	
	No. of Firms	%	No. of Firms	%
1995	11	5.3140	196	94.6859
1996	11	5.3140	196	94.6859
1997	11	5.3140	196	94.6859
1998	11	5.3140	196	94.6859
1999	11	5.3140	196	94.6859
2000	15	7.2464	192	92.7536
2001	21	10.1449	186	89.8551
2002	38	18.3575	169	81.6425
2003	51	24.6377	156	75.3623
2004	55	26.5701	152	73.4299
2005	64	30.9179	143	69.0821
2006	65	31.4009	142	68.5990
2007	68	32.8502	139	67.1498
2008	67	32.3672	140	67.6329
2009	67	32.3672	140	67.6329
2010	71	34.2995	136	65.7005
2011	72	34.7826	135	65.2174
2012	69	33.3333	138	66.6667
2013	72	34.7826	135	65.2174
2014	71	34.2995	136	65.7005
2015	72	34.7826	135	65.2174
2016	70	33.8164	137	66.1836

The overall hedging structure comprises the financial and operational hedging. In this regards, operational hedging is deemed as befitting the objectives to provide long-term hedging for the multinational's economic exposure. Operational hedging may either be used to compliment or substitute the financial hedging practice within the firms' investment structure. The role was made possible considering the ability of operational hedging to exploit company specific-asset and acquire the potential economic of scales (Hadian & Adaoglu, 2020). Differences in tax structures across countries would further boost the value-creating benefit of operational hedging.

On the other hand, having operations across countries would also make way for issues such as systematic risk and agency problem (Reeb et al., 1998). Systematic risk escalates as the firms now must adapt the new market's environment especially if the market possesses very different characteristics than its domestic market. Secondly, geographical distance may make it harder to oversee operations in foreign countries, thus escalates the agency problem. Based on these reasonings, this study is motivated to investigate whether financial and operational hedging practices provide significant effects towards the currency exposure in the country. Findings on the significant effect of hedging practice can be utilised to motivate more Malaysian firms to engage hedging practice in their operation for better exposure hedging. Furthermore, low utilisation level must be prompted by any trend or behaviour that influence the overall tendency of these firms to employ hedging practice.

Consequential to the currency exposure issues, the study later addresses the issues on the foreign currency hedging practice in Malaysia. Generally, hedging is deemed as enhancing the firm value. According to the theory of hedging (Smith & Stulz, 1985), hedging minimises the exposure by eliminating any probable claim and provides smoother expected cash flow through tax benefits and lower cost of financial distress. In turn, smooth future cash flow reduces the possibility to engage in external funding and simultaneously enables the firms to construct suitable investment strategy. In other words, hedging is deemed as reducing the underinvestment problem due to the lower variability in the future cash flow (Froot et al, 1993).

The low practice level as found in our preliminary analysis was due to the complexity of the contract and lack of expertise in the market (Ameer, 2010). The OTC foreign exchange turnover data by the Bank of International Settlement (2019) show that Malaysia only uses 10,119 financial instruments compared to 1,370,119 in the US. The number is still small compared to Singapore at 639,869. The UK as the world's biggest financial market records 3,575,409 instrument usage. Low level of hedging practice despite the theoretical effectiveness of hedging to reduce the exposure level uncovers a gap in the study of hedging practice. Moreover, mixed results by previous studies on the effect of FCD use towards the level of currency exposure (Allayannis & Ofek, 2001; Yip & Nguyen, 2012) have been reasoned by the existence of other risk management

techniques such as operational hedging which reduced the significant association between currency exposure and financial hedging (Yip & Nguyen, 2012).

With this regard, the study investigates the significance of corporate hedging comprising the financial and operational hedging towards the level of currency exposure in Malaysia. The mixed empirical findings in past studies stresses the need of a country specific study to provide understanding on the extent of corporate hedging as a hedging mechanism in Malaysian firms and facilitate better future policy or strategy planning. The impact of corporate hedging use on currency exposure, which is shown to have mixed findings in past studies, can be measured by investigating the significance of corporate hedging usage in Malaysian firms. The fact that the topic has garnered mixed findings in past studies further dictates the necessity of this study to especially focus on a developing market such as Malaysia.

Multinationals mitigated different foreign currency risks by using financial and operational hedging (Allayannis et al., 2001). Operational hedging through geographical diversification was also used to mitigate foreign currency risks. Operational hedging was defined as hedging through a company's foreign production facilities. Operational hedging was used to mitigate long-term and permanent risk exposure (economic exposure). Studies typically tested the value effects of financial hedging and operational hedging simultaneously. The focus of the study is whether operational hedging substituted or complemented the financial hedging. Similar to financial hedging, operational hedging affected the significantly exposed Malaysian multinationals. Geographical diversification through foreign subsidiaries constituted the multinationals' selection criteria in evaluating the value effects of the potential operational hedging strategy (Allayannis et al., 2001). The operational hedging normally involved exporting the final goods while simultaneously importing the intermediate inputs (Kuzmina & Kuznetsova, 2017).

In response to these issues, the study involves two stages of analysis. The first step examines the level of currency exposure while the second stage investigates the effectiveness of corporate hedging practices to reduce currency exposure among Malaysian non-financial firms. Meanwhile, the second stage of the study is motivated by the limited use of hedging tool in managing currency exposure. Hence, the study investigates the significance of corporate hedging towards the currency exposure level in Malaysia. In this study, the corporate hedging practices are inclusive of both the financial and operational hedging segments.

The remainder of this paper is structured as follows. The next section reviews the prior literature and develops our research questions, while Section 3 discusses our data and methodology. Section 4 reports the results from our multivariate analysis and robustness tests. Section 5 summarises and concludes.

LITERATURE REVIEW

HEDGING AND FIRM VALUE

According to the theory of hedging (Smith & Stulz, 1985), hedging minimises the exposure by eliminating any probable claim that may affect the company's cash flow. Reducing unwanted noise in the cash flow is relevant with the maximisation of shareholder's wealth principle. The arrival of numerous hedging tools and derivatives in the market has marked hedging as a signal of modern and advanced corporate investment management (Atilgan et al., 2013). Despite the importance of foreign currency hedging in influencing foreign currency exposure, the number of studies devoted to study the effectiveness of hedging activities is limited. Specifically for Malaysian firms, the scarcity is inclusive of both financial and operational hedging to reduce the firms' sensitivity to foreign currency exposure.

In the absence of market imperfections, hedging activities are connoted as not affecting the company value (Modigliani & Miller, 1958). However, hedging theories that were based on market imperfections postulated that hedging could increase firm value through higher tax benefits and lower financial distress, underinvestment, and agency costs (Smith & Stulz, 1985; Bessembinder, 1991; Froot et al., 1993). Similarly, Boyer and Marin (2013) stressed the significance of hedging to lower the firm's risk of financial distress, volatility of equity implied assets, and potential debt. In overall, currency hedging was said to effectively lower the potential risk that may arise from currency exposure and eventually increased the stock returns. The negative sign and the significance of beta on the regressions were often used to imply the effectiveness of hedging practice.

Smith and Stulz (1985) treated hedging as a part of firm's financial decision to develop the positive hedging theory. They argued that derivatives mitigated the volatility of firm cash flows and reduced the expected payment of taxes, costs of financial distress, and agency costs. Reducing the cash flow volatility benefited the firm in several theoretical aspects. Smith and Stulz (1985) suggested that hedging could lower the cost of financial distress if the financial distress imposed some cost on the firms. Smoothing the firm off balance sheet enabled better control of firm risk and shielded from any uncertainties. Hence, the hedging provided both risk minimisation and firm-value maximisation benefits (Chong et al., 2014).

Allayannis et al. (2001) were one of the first authors to look at both financial and operational hedging for a large multi-industry sample. In contrast to financial hedging in which derivatives provided a synthetic hedge in order to eliminate the effects of exposure, operational hedging focused on reducing the source of exposure. Several other studies examined the relationship between operational and financial hedging and the degree of multinationality of a firm. Kim et al. (2006) studied the effectiveness of reducing exposure using these two types of hedging techniques. They concluded that operational

and financial hedging were considered as complimentary as both hedging forms reduced foreign exchange exposure but in different ways. Operational hedging was found to be effective to reduce long-term exposure (also known as economic exposure) and financial hedging was found to be successful to lower short term foreign exchange exposure.

Allayannis et al. (2001) argued that operationally hedged firms were more likely to employ financial hedging strategies in conjunction with operational hedging policies in order to maximise their shareholder value. The interrelationship of financial and operational hedging was further examined by Hutson and Laing (2014) who find an inverse relation between operational hedging, financial hedging and the firm's individual foreign exchange exposure. They further provided evidence on the effectiveness of operational hedging among many multinational firms to be the only risk management practice for foreign exchange exposure.

Over time, hedging was regarded as a signal of modern and advanced corporate investment management due to its flexibility and non-stringent regulation (Atilgan et al., 2013). However, there were some disputes regarding the effectiveness of hedging practice. Arguments on the benefits of hedging were mostly based on the ability of the practice to offset the exposure arising from firms' daily operations. Hedging also enabled non-financial firms to focus on their main activities without having to frequently scrutinise their exposure level. On the contrary, hedging could turn out to be detrimental under a few circumstances. Opting for a hedging position without considering the existing competitive pressure would adversely affect the firms. Hence, it was crucial for firms to keep updated with ample information pertaining the hedging practice.

Mixed findings were recorded in previous studies on the effect of foreign currency derivative use towards the level of currency exposure (Allayannis & Ofek, 2001; Yip & Nguyen, 2012) due to the relationship between financial hedging and currency exposure (Yip & Nguyen, 2012). First, the mixed findings were due to the existence of other risk management techniques such as operational hedging which reduced the significant association between currency exposure and financial hedging. Second, the firms did not fully implement hedging. Instead, the firms opted selective hedging whereby the hedging strategy did not minimise the exposure level of the whole firms' investment basket. Third, insignificant relationship existed between firm returns and macroeconomic factors such exchange rate, interest rate, and commodity risk. Fourth, the effect of financial hedging may become less substantial if the firms were large, diversified and had good credit quality. In this notion, the studies on financial hedging attempted to incorporate a few approaches that were potentially consistent with the hedging theory. As firm that choose to hedge its risk through derivative hedging usually takes the position that could neutralise the exposure, the choice would prompt smoother cash flows in the firms. Hence, lack of hedging practice increases the sensitivity of firm's value

to exchange rate variability. Such sensitivity would be detrimental to the firm's future cash flow.

Bartram and Bodnar (2007) noted that firms with insignificant observed exchange rate exposure were likely to have effectively managed their exposure level. Hence, comparatively lower currency exposure in advance market was due to the existence of numerous strategies and tools in the market to alleviate the impact of exposure. Financial hedging involved the use of financial derivative as an investment tool to hedge and mitigate currency exposure. In other words, derivatives protected any transaction from unexpected currency movement. In fact, financial derivative had become a standard tool to hedge exchange rate related risk (Döhring, 2008).

In contrary, Hadian and Adaoglu (2020) recorded no evidence of value effect from operational hedging practice by Malaysian non-financial firms. Their study on both financial and operational hedging in developing countries provided empirical evidence of financial hedging significant effect to firm value in comparison to the operational hedging practice. Laing et al. (2020) also found similar insignificance of operational hedging on commodity price risk in the US oil and gas companies. Defining operational hedging as multinationality, the study showed that operational and financial hedging were substitute in nature. However, the operational hedging was insignificant to mitigate the exposure level of commodity price in contrast to significant financial hedging practice.

DATA AND METHODOLOGY

DATA

This study encompasses the hedging practices namely the financial hedging and operational hedging. In this sense, the financial hedging is denoted by involvement of the particular firm with foreign currency derivative as a form to hedge their exposure. Meanwhile, operational hedging requires data of the country and region that the firm operates inclusive of Malaysia. Data for hedging practice are acquired from the annual financial reports of the respective firms. Information on the use of derivative hedging is found under the 'Foreign Currency Risk' section in the financial report, in which the firms clarify whether they enter any derivative contract to monitor their exposure to foreign currency risk for that particular year. However, inconsistency is observed as most of the sample firms do not clarify the types of the derivative that they entered into. Hence, the data are compiled into single variable rather than segregating them into different types of derivatives. The firms are also regarded as not entering into the derivative hedging should the firm stated they opted for natural hedging practice.

Meanwhile, enforcement of the financial disclosure by the Malaysian Accounting Standard Boards has facilitated the study to observe the hedging activities among the selected firms. Regulation of the disclosure of hedging information in Malaysian

Financial Reporting Standards 7 (MFRS 7) has revolved from the previous IAS 39 to include an additional chapter on hedging accounting (Chong et al., 2014). The chapter specifies the qualifying hedging instrument and the hedged items, in which a derivative measure at fair value through profit or loss is regarded as a hedging instrument.

On the other hand, the financial periods data utilise the dummy variable. As the data in the study span from 1995-2016, inclusion of the financial periods is relevant considering the long-time horizon. With this, the financial periods included in the study are the Asian financial crisis, peg period, and global financial crisis. In this sense, the data will be 1 for the specific time-period and 0 otherwise.

For consistency purpose, robustness analysis utilising wavelet analysis was conducted to measure currency exposure across different timescales. The estimated currency exposure was then used to measure the effect of financial hedging and operational hedging under different timescales.

ESTIMATING AND DETERMINING CURRENCY EXPOSURE

In the first stage of the analysis, the study adopted the model introduced by Jorion (1990) to measure the level of currency exposure:

$$R_{it} = \gamma_{0i} + \gamma_1 R_{mt} + \beta_{US\$} S_{US\$,t} + \mu_{it} \quad (1)$$

Where R_{it} is monthly stock return of firm i measured as $R_{it} = \ln \frac{P_t}{P_{t-1}}$, R_{mt} is monthly return on the market index measured as $R_{mt} = \ln \frac{R_{mt}}{R_{t-1}}$, $S_{US\$,t}$ is nominal monthly change in USD exchange rate measured as $S_{US\$,t} = \ln \frac{s_t}{s_{t-1}}$, and μ_t is the regression residual. The study followed the precaution by Bacha et al. (2013) to add a Generalised Autoregressive Conditional Heteroscedasticity (GARCH (1,1) specification into equation (1) to cater for heteroscedasticity problem. The study also employed the Wald test to detect multicollinearity issue in the data.

HEDGING MEASURES

Financial Hedging

In order to test for the effect of financial hedging practice, the exchange rate coefficient (β) values acquired in previous section was incorporated into the second stage cross-sectional regression against the dummy variable for hedging use in equation (2). The coefficient value denotes the dependent variable while the application of foreign currency derivative in the firm structure is the independent variable. The model hypothesises significant effect of financial hedging practice to mitigate the exposure level at 10% significant level. In order to overcome the potential issue of serial correlation and heteroscedasticity among time series data, Newey-West specification was also conducted into the analysis. The OLS model is depicted as below:

Step 1: Collection of financial hedging practice data from the financial reports.

Data of financial hedging practice are collected from the financial reports of the sample firms. The data were dichotomous in nature, with 1 denoting practice of financial hedging for the particular year and zero otherwise. However, the study resorts to use the average of dummy variables for the financial hedging practice due to stationarity issue. The average is calculated by dividing the sum of the total number of financial hedging practice with the number of sample period. For an example, if a firm implements financial hedging in its risk management strategy for the whole sample period of 21 years, the sum of the firm's dummy will be 21. As the study span for 21 years, dividing the sum of dummy with the number of sample period will give out an average of 1. On the other hand, if the firm only implements financial derivative hedging for 10 out of 21 years of sample study, the average will be $10/21=0.48$.

Step 2: The OLS model for the financial hedging practice is formed. For firm i , the equation for the residual measurement is;

$$\widehat{EXP}_i = \gamma_0 + \gamma_1 USE_i + \varepsilon_i \quad (2)$$

Where:

- \widehat{EXP}_i = estimated currency exposure for firm i from the symmetric foreign currency exposure model
- USE_i = average dummy variable for foreign currency derivative use for firm i
- ε_i = regression residual

Step 3: Newey-West specification is conducted to overcome autocorrelation issue.

Newey-West Specification

Newey-West (1987) variance estimator is an extension of the ordinary-least square regression that produces consistent estimation when there is autocorrelation in addition to possible heteroscedasticity problems. Specifically, the model is as follows:

$$\hat{\beta}_{OLS} = (X'X)^{-1}X'y \quad (3)$$

$$\widehat{Var}(\hat{\beta}_{OLS}) = (X'X)^{-1}X'\hat{\Omega}X(X'X)^{-1} \quad (4)$$

Coefficient estimates in Newey-West model are simply those of the initial linear regression. For any lag $l > 0$, the variance estimates are calculated using the Newey-West formula:

$$Q^* = \frac{1}{T} \sum_{t=1}^T e_t^2 x_t x_t' + \frac{1}{T} \sum_{l=1}^L \sum_{t=l+1}^T w_l e_t e_{t-l} (x_t x_{t-l}' + x_{t-l} x_t') \quad (5)$$

$$\text{with } w_l = 1 - \frac{l}{L+1}$$

Where:

- Q^* = A matrix of Sum of Squares
- x_t = The row of the X matrix observed at time t
- L = Number of lag
- w_l = Weight that represents the distance of between the disturbances

For the analysis on the effect of financial hedging practice, the following hypotheses are tested:

H_0 = There is no significant relationship between financial currency derivative practice and the level of foreign currency exposure among the sample firms.

Operational Hedging

On the other hand, the exchange rate coefficient value was also used as the dependent variable in assessing the effect of operational hedging towards the firm value. While the coefficient of exposure (β) is used as the dependent variable likewise to equation (2), the following model uses the dispersion index of the firm as the independent variable. The model hypothesises significant effect of operational hedging practice to mitigate the exposure level at 10% significant level. The dispersion of firm operation is categorised into two levels of geographical dispersions namely the countries and regional dispersions. The countries and regional dispersion are considered based on the geographic dispersions of the sample firms. For this purpose, the study utilises the Hirshman-Herfindahl index as used by Allayannis et al. (2001). The Hirshman-Herfindahl index is commonly used to measure market concentration or competition (Le et al., 2021). Specifically, the index is calculated as the sum of squares of the market shares of each firm participating in a certain market. A striking advantage of the Hirshman-Herfindahl index lies in its simple measurement which only requires small amount of data. However, such simplicity also causes a drawback for the index as it hinders the index from taking into account the complexity of the various market. Still, the measurement is pursued in this study as it fits the objective to provide an overview of the

dispersion concentration of the respective sample firms. The dispersion index is calculated as follows:

Step 1: Calculation of Hirshman-Herfindahl index to denote the level of operational hedging.

The Hirshman-Herfindahl index is measured as:

$$h\text{-index} = \sum_{i=1}^n \left(\frac{\text{number of subsidiaries in country } i}{\text{total number of subsidiaries}} \right)^2 \quad (6)$$

Step 2: Model to measure the effect of operational hedging incorporating the exposure level and dispersion index is formed.

Hence, the model for firm i is;

$$\overline{EXP}_i = \gamma_0 + \gamma_1 \text{disp}_{index_i} + \theta_i \quad (7)$$

Where:

\overline{EXP}_i = estimated currency exposure for firm i from the symmetric foreign currency exposure model

disp_{index} = dispersion index measured as one minus the Hirshman-Herfindahl index ($1 - h\text{-index}$) of the number of countries/regions the firm i operates

θ_i = regression residual

The dispersion data are collected manually from the annual reports of the sample firm. The data are based on the geographical diversification undertaken by the firms to disperse their operation and production. The initial data are based on the countries that the firms have their operations in. Later on, the data are then grouped into seven regions namely the Eastern and East Asian, Latin America and the Caribbean, Australia and New Zealand, Western Africa, Western and Central Asia, Southern Asia and Europe.

Step 3: Newey-West specification is conducted to overcome autocorrelation issue.

Newey-West Specification

Likewise to the regression on the financial hedging, this section also implements the Newey-West specification to control for autocorrelation and heteroscedasticity problems in the model. Specifically, the model is as follows:

$$\hat{\beta}_{OLS} = (X'X)^{-1}X'y \quad (8)$$

$$\widehat{Var}(\hat{\beta}_{OLS}) = (X'X)^{-1}X'\hat{\Omega}X(X'X)^{-1} \quad (9)$$

Coefficient estimates in Newey-West model are simply those of the initial linear regression. For any lag $l > 0$, the variance estimates are calculated using the Newey-West formula:

$$Q^* = \frac{1}{T} \sum_{t=1}^T e_t^2 x_t x_t' + \frac{1}{T} \sum_{l=1}^L \sum_{t=l+1}^T w_l e_t e_{t-l} (x_t x_{t-l}' + x_{t-l} x_t') \quad (10)$$

$$\text{with } w_l = 1 - \frac{l}{L+1}$$

Where:

- Q^* = A matrix of Sum of Squares
- x_t = The row of the X matrix observed at time t
- L = Number of lag
- w_l = Weight that represents the distance of between the disturbances

For the analysis on the effect of operational hedging practice, the following hypotheses are tested:

H_0 = There is no significant relationship between operational hedging practice and the level of foreign currency exposure among the sample firms.

Interaction Terms

In order to examine the effect of both financial and operational hedging towards the sample firms, interaction terms are included in the previous (2) and (7) models.

Step 1: The model to measure the effects of both financial and operational hedging practices are as the following:

$$\widehat{EXP}_i = \gamma_0 + \gamma_1 disp_{countries,i} + \gamma_2 disp_{regions,i} + \gamma_3 USE_i + \gamma_4 disp_{countries} * disp_{regions,i} + \gamma_5 USE * disp_{countries}_i + \gamma_6 USE * disp_{regions}_i + \theta_i \quad (11)$$

Where:

- \widehat{EXP}_i = currency exposure for firm i from the symmetric foreign currency exposure model

$disp_{countries}$	=	dispersion index based on countries for firm i
$disp_{regions}$	=	dispersion index based on regions for firm i
$disp_{countries} * disp_{regions}$	=	interaction term of countries and regions indexes for firm i
USE_i	=	average dummy variable for foreign currency derivative use for firm i
$USE * disp_{countries}$		interaction term of countries index and foreign currency derivative use for i
$USE * disp_{regions}$		interaction term of regions index and foreign currency derivative use for firm i
θ_i		regression residual

In overall, these models correspond to the fourth objective of the study to provide an overview on the effectiveness of corporate hedging practice among the sample firms in Malaysia. The analyses comprehensively include two main components of corporate hedging namely the financial and operational hedging practices. Simultaneous consideration of both corporate hedging aspects provides an insight on the effectiveness of the current hedging practices under concurrent implementation.

Step 3: Newey-West specification is conducted to overcome autocorrelation issue.

Newey-West Specification

An extension from the regression in equation 9, Newey-West variance estimator was also used to produce consistent estimation when there is autocorrelation in addition to possible heteroscedasticity problems. Specifically, the model is as follows:

$$\hat{\beta}_{OLS} = (X'X)^{-1}X'y \quad (12)$$

$$\widehat{Var}(\hat{\beta}_{OLS}) = (X'X)^{-1}X'\hat{\Omega}X(X'X)^{-1} \quad (13)$$

Coefficient estimates in Newey-West model are simply those of the initial linear regression. For any lag $l > 0$, the variance estimates are calculated using the Newey-West formula:

$$Q^* = \frac{1}{T} \sum_{t=1}^T e_t^2 x_t x_t' + \frac{1}{T} \sum_{l=1}^L \sum_{t=l+1}^T w_l e_t e_{t-l} (x_t x_{t-1}' + x_{t-l} x_t') \quad (14)$$

$$\text{with } w_l = 1 - \frac{l}{L+1}$$

Where:

Q^*	=	A matrix of Sum of Squares
x_t	=	The row of the X matrix observed at time t
L	=	Number of lag
w_l	=	Weight that represents the distance of between the disturbances

For the analysis on the effect of financial and operational hedging practices, the following hypotheses are tested:

H_o = There is no significant relationship between financial and operational hedging practices and the level of foreign currency exposure among the sample firms.

Robustness Test: Wavelet Analysis

For each stock market, we collect daily return series (256 observations) for each stock in the sample as well as for the market index. Daily stock returns are calculated from stock price (P) as follows,

$$r_{it} = \ln\left(\frac{P_{it}}{P_{it-1}}\right) \text{ for stock } i \text{ at day } t \quad (15)$$

While the daily return on the market index and currency exchange are calculated as follows:

$$r_{mt} = \ln\left(\frac{P_{it}}{P_{it-1}}\right) \quad (16)$$

$$r_{USDt} = \ln\left(\frac{USD_t}{USD_{t-1}}\right) \quad (17)$$

After calculating the return series for every stock and for the market, the wavelet analysis is used to separate each of the return series into its constituent multiresolution (multihorizon) component. This is achieved by applying the discrete wavelet transformation (DWT) on daily return series through even-spaced point of time distribution across the sample period. The transformation enables decomposing the return series from time domain to scale domain which provides better understanding on the frequency of the activity occurrence. Data decomposition involves the following scale crystals (j): D1 (2-4 days), D2 (4-8 days), D3 (8-16 days), D4 (16-32 days), D5 (32-64 days), D6 (64-128 days), and D7 (128-256 days) using the orthogonal Haar wavelet transformation. The decomposition is conducted until D7 to denote the longest timescale in the study which is 256 days. This scale covers the standard 252 trading days in a year.

The transformed return series $r(t)$ represents a linear combination of wavelet functions as follows:

$$r(t) \approx \sum_k s_{j,k} \phi_{j,k}(t) + \sum_k d_{j,k} \varphi_{j,k}(t) + \sum_k d_{j-1,k} \varphi_{j-1,k}(t) + \dots + \sum_k d_{1,k} \varphi_{1,k}(t) \quad (18)$$

Where:

j is the number of scale crystals (intervals or frequencies)

k is the number of coefficients in the specified component

$\phi_{j,k}(t)$ and $\varphi_{j,k}(t)$ are the father and mother orthogonal wavelet pair that denote the following expression for $j=1$ to 7 , respectively

$$\phi_{j,k}(t) = 2^{-\frac{j}{2}} \phi\left(\frac{t-2^j k}{2^j}\right) \quad (19)$$

$$\varphi_{j,k}(t) = 2^{-\frac{j}{2}} \varphi\left(\frac{t-2^j k}{2^j}\right) \quad (20)$$

Father wavelet represents the low-frequency (smooth) parts of the series, while the high-frequency (detailed) parts of the series are represented by mother wavelet.

$$s_{j,k} \approx \int \phi_{j,k}(t) f(t) dt \quad (21)$$

$$d_{j,k} \approx \int \varphi_{j,k}(t) f(t) dt \quad (22)$$

$s_{j,k}$ are called the 'smooth' coefficients that represent the underlying smooth behaviour of the series. On the other hand, the $d_{j,k}$ are called the 'detail' coefficients that represent the scale deviations from the smooth process. The levels of activities are theoretically different between the mother and father wavelet, with more information is contained in the mother wavelet.

Once the decomposed series for each series for each frequency is obtained, an OLS regression is run for each stock on each decomposed crystal of the market portfolio R_m^j and currency exchange R_{USD}^j as per the following model by Jorion (1990):

$$R_i = \alpha_i^j + \beta_i^j R_m^j + \beta_i^j R_{USD}^j + \varepsilon_i^j \quad \text{for } j=1 \text{ to } 5 \quad (23)$$

The coefficient β_i^j is the key variable we are trying to examine. If β_i^j is essentially similar across scales j , then the beta does not showcase any multiscale nature.

Hence, the beta calculated using the daily return basically does not differ from the beta calculated using the weekly or monthly returns. However, if changes of β_i^j depend on the scale j , then the beta is deemed as possessing multiscale behaviour. With this, the return interval must be specifically chosen rather than the current arbitrary choice practice. Once the results are obtained, the model is then tested for heteroscedasticity issue by utilising the Breusch-Pagan test. Based on the equation (23), model suffering from heteroscedasticity will be re-run using the GARCH(1,1). GARCH(1,1) is used due to its ability to model the variance generating process in financial time series. Equation (23) is also re-run using real interest rate for robustness purpose which is included in the later section of the paper.

RESULTS

CURRENCY EXPOSURE EFFECTS

This section discusses exchange rate exposure at the firm level analysis in comparison to the overall level analysis.

Table 3: Currency Exposure Level of Malaysia Non-financial Firms

Panel Analysis	
Constant	-0.0036 (0.0000)
Market Index	1.1314 (0.0000)
Currency Exchange	-0.0633 (0.0000)

The results of the regressions $R_{it} = \alpha_{0i} + \alpha_1 R_{mit} + \beta_{US\$} S_{US\$,it} + \mu_{it}$ for both panel and firm-level analyses.

Table 3 (cont.): Currency Exposure Level of Malaysia Non-financial Firms

Firm-level Analysis	
Mean of beta	-0.2942
Median of beta	-0.2758
SD of beta	0.4615
Maximum beta	1.1102
Minimum beta	-2.2429
No of Positive Cases (%)	59 (28.50%)

No of Negative Cases (%)	148 (71.49%)
Significant Positive Cases at 10% (%)	9 (4.35%8)
Significant Negative Cases at 10% (%)	65 (31.40%)
Total \ of Significant Cases at 10% (%)	74 (35.75%)

The results of the regressions $R_{it} = \alpha_{0i} + \alpha_1 R_{mit} + \beta_{US\$} S_{US\$,it} + \mu_{it}$ for both panel and firm-level analyses.

Currency exposure is found to be significantly effective towards the sample firms' stock return. The effect is negative, indicating lower stock return potential for higher exposure level. In Table 3, 35.75% of all sample firms have statistically significant exchange rate exposure. The high proportion is parallel with high values reported by Bacha et al. (2013) for Malaysia as a developing country.

FINANCIAL HEDGING

In Table 4, the financial hedging practice was found to be significantly associated with foreign exchange exposure. Considering the high exposure level recorded for the sample firms in the study, financial hedging was shown as beneficial for firms with to high currency exposure (Clark & Judge, 2008). The significant effect further enhanced the negative beta of the financial hedging practice translated to lower currency exposure for any financial hedging practice within the firms' operation. Statistically, any 1 percent increase in financial hedging intensity would reduce the extent of foreign currency exposure by 0.28 percent. With this, financial hedging practice was effective in managing the currency exposure faced by the sample firms as well as protecting the firms' future cash flows from unexpected volatility and alleviated market risk. Financial hedging was also associated with higher firm value if the practice was motivated by the shareholders' wealth maximisation (Sikarwar & Gupta, 2018).

Table 4: Effect of Financial Hedging Practice towards Foreign Currency Exposure

Currency Exposure and Financial Hedging Practice (FCD Use)	
Constant	0.0011
Financial Hedging	-0.2875 (0.000) ^c

The value in parenthesis indicates p-value. ^cSignificant at 1% level.

OPERATIONAL HEDGING

In this section, the Hirshman-Herfindahl Index measured the operational dispersion across countries and regions against the beta coefficient was previously acquired.

Table 5: Effect of Operational Hedging towards Foreign Currency Exposure

Panel A: Currency Exposure and Countries Index	
Constant	-0.0351
Countries Index	0.0958 (0.4365)
Panel B: Currency Exposure and Regions Index	
Constant	-0.2902
Regions Index	-0.3229 (0.8415)

The study followed Newey-West procedure to produce robust standard error estimates in dealing with heteroscedasticity and serial correlation problems. The value in parenthesis indicates p-value.

The index was based on two levels, namely the regions and countries indexes. In Table 5, the practice of operational hedging was insignificantly associated with foreign exchange exposure under both countries ($\beta=0.0958$, $p\text{-value}=0.4365$) and regions ($\beta=-0.3229$, $p\text{-value}=0.8415$) indexes. The results show that the sample firms were not affected by the geographical diversification regardless of the magnitude of the diversification. Two reasonings could be offered to interpret the insignificance of the operational hedging. First, the study acknowledged that the insignificant effect of operational hedging was driven by the significance of the financial hedging practice. In accordance with Chowdhry (2002), firms tended to employ financial hedging which incurred lesser cost than the operational hedging.

Secondly, the study conducted some analysis on the distribution of countries and regions involved in the diversification activities. As can be seen in Figure 1, the firms were concentrated on six countries with more than ten firms having their operation plants in the countries. The rest of the sample firms had less than ten operation plants in the respective countries. While this was seen as dispersing enough, further observation on Figure 2 on the tabulation of firms according to regions showed the sample firms mainly diverged their operations in the South East Asia (SEA) region; 115 operation plants were established in the region. The figures justified the insignificant effects of operational hedging as the close association of the ringgit with the SEA currencies minimised the potential diversification effect. The second region with the most operation plants was the

Latin America and the Caribbean regions. Compared to 47 operation plants in the Latin region, it was obvious that the Malaysian sample firms mainly diversified their operation in the ASEAN countries. The sample firms have also noticeably planted their operations in Australia and New Zealand with 20 operation plants in the region.

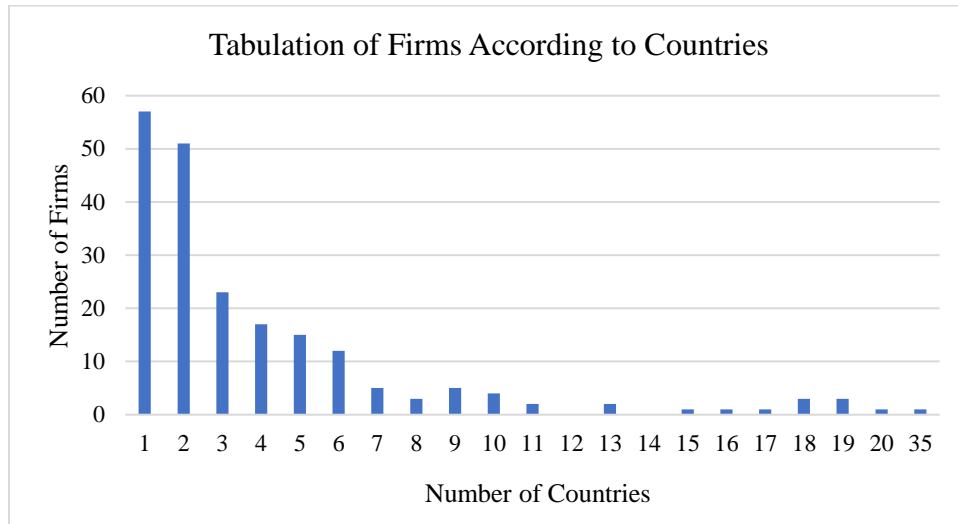


Figure 1: Tabulation of Firms across Countries Involved with the Firms’ Multinational Operations

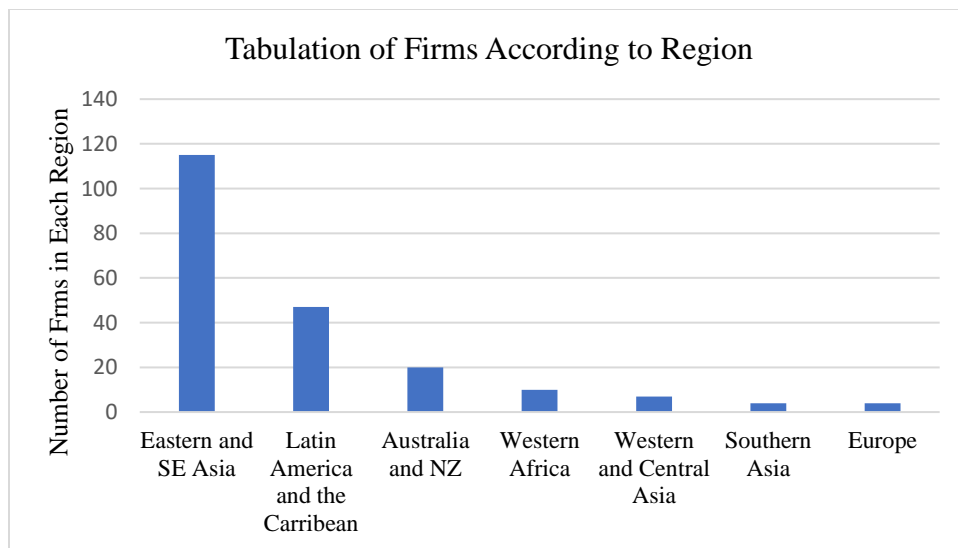


Figure 2: Tabulation of Firms across Regions Involved with the Firms’ Multinational Operations

Another observation was the correlation between the selected foreign currencies with the Malaysian ringgit in Table 6. Out of 55 currencies involved in the foreign operation of the sample firms, the ringgit was found to be significantly correlated with 16 currencies namely the Australian Dollar, Brazilian Real, Bruneian Dollar, Sri Lankan Rupee, Hong Kong Dollar, Indian Rupee, Indonesian Rupiah, South Korean Won, Mongolian Togrog, Norwegian Krone, Peruvian Sol, Singapore Dollar, Swiss Franc, New Taiwan Dollar, Thai Baht, and UAE Dollar. The correlation showed that the firms were significantly correlated with almost one-third of the involved currencies. Specifically, the ringgit was positively correlated with majority of Southeast Asian countries that also exhibited similar market characteristics. Thus, operational hedging into these countries did not fully reduce the currency exposure level for the sample firms.

Up to this point, the insignificance of the operational hedging was attributable to the close association between the ringgit and the currencies of which the sample firms had their foreign operations. In this sense, the diversification effect was minimal for the sample firms. The firms failed to fully benefit from the diversification such as minimising the risk of loss and safeguarding their firm value against adverse market effect because they were exposed to similar market volatility. Together with the significant financial hedging, the insignificance of the operational hedging was justified.

From the magnitude perspective, the negative beta coefficient for the regions index (-0.0351) sat well with the expected inverse relationship between the hedging practice and exposure level. The inverse relationship signified the effectiveness of regional diversification to manage the currency exposure of the sample firms. Operations across different regions with low correlation would expose the firms to different exposure levels. Negative exposure in one particular region could be levelled out by better market condition in another region, ultimately increased the firms' revenue provided by the diversification benefits.

Meanwhile, positive effect was recorded for countries index. Following the reasoning by Reeb et al. (1998), countries hedging tended to incur higher systematic risk and agency problems which would actually prompt higher exposure for the firms. Agency problem tended to arise when the firms faced constraints in monitoring the managers. The constraints could be caused by cultural differences, timing issues and geographical limitations. In addition, ineffective monitoring would increase the fluctuations of the anticipated cash flows from overseas operations, thus further spurred the exposure level rather than diminishing the exposure effect (Reeb et al., 1998).

Table 6: Correlation of Foreign Currencies with the MYR/USD

Country	Currency	Correlation
Eastern Asia and Southeast Asia		
Brunei	Brunei Dollar	0.6121
Cambodia	Cambodian Riel	-0.3187
China	Renminbi	-0.0419
Hong Kong	Hong Kong Dollar	0.6181
Indonesia	Indonesian Rupiah	0.6199
Japan	Japanese Yen	0.0210
Korea	South Korean Won	0.7122
Laos	Laos Kip	-0.3497
Mongolia	Mongolian Togrog	-0.5028
Myanmar	Myanmar Kyat	0.3448
Philippine	Philippine Peso	0.2225
Vietnam	Vietnamese Dong	-0.2367
Taiwan	New Taiwan Dollar	0.6012
Thailand	Thai Baht	0.6952
Singapore	Singapore Dollar	0.6121
Australia and New Zealand		
Australia	Australian Dollar	0.6741
Western Africa		
Ghana	Ghanaian Cedi	-0.4153
Nigeria	Nigerian Nara	-0.4840
Seychelles	Seychellois Rupee	-0.4864
Mauritius	Mauritian Rupee	0.4210
Western Asia and Central Asia		
Qatar	Qatari Rial	0.1779
Turkey	Turkish Lira	0.2576
UAE	United Arab Emirates Dirham	-0.5370

Table 6: Correlation of Foreign Currencies with the MYR/USD (cont.)

Country	Currency	Correlation
Latin America and the Caribbean		
Argentina	Argentine Peso	-0.0278
Brazil	Brazilian Real	0.6377
Canada	Canadian Dollar	0.4793
Cayman Island	Cayman Island Dollar	-0.3371

Czech	Czech Koruna	0.3700
Mauritius	Mauritian Rupee	0.4210
Mexico	Mexican Peso	0.0443
Peru	Peruvian Sol	-0.6839
Seychelles	Seychellois Rupee	-0.4864
Southern Asia		
Bangladesh	Bangladeshi Taka	-0.4540
India	Indian Rupee	0.5529
Pakistan	Pakistani Rupee	0.2531
Sri Lanka	Sri Lankan Rupee	-0.1269
Colombo	Sri Lankan Rupee	0.5809
Europe		
Austria	Euro	0.3682
Belgium	Euro	0.3682
British	Pound Sterling	-0.3371
Bulgaria	Bulgarian Lev	0.3723
Finland	Euro	0.3682
France	Euro	0.3682
Germany	Euro	0.3682
Greece	Euro	0.3682
Hungary	Hungarian Forint	0.4429
Italy	Euro	0.3682
Luxemburg	Euro	0.3682
Netherland	Euro	0.3682
Norway	Norwegian Krone	0.5987
Poland	Polish Zloty	0.4312
Romania	Romanian Leu	0.3897
Sweden	Swedish Krona	0.0697
Switzerland	Swiss Franc	0.5576
Slovakia	Euro	0.3682
Spain	Euro	0.3682

INTERACTION TERM

Interaction term tests the relationship between the Hirshman-Herfindahl index and the financial hedging practice. The results are presented in Table 7. The table comprised the countries index, regions index, financial hedging, interaction term of countries index and regions index, interaction term of countries index and financial hedging use, and interaction term of regions index and financial hedging. These variables are tested under

four models in order to identify any specific behaviour or patterns of the corporate hedging practice among the sample firms. For comparison purpose, results from the regressions of financial and operational hedging were put in columns 1 -3.

The first model in column 4 focused on the interaction between the countries and regions indexes. Both countries and regions indexes exerted negative effects towards the currency exposure, indicating the ability of the hedging practices to lower the exposure level. As for the interaction term, simultaneous effect of countries and regions indexes managed to provide some forms of hedging effect as it lowered the exposure by 0.0583 percent with 1% increase of interaction term. However, the hedging effect of these two indexes was insignificant at 0.9, thus indicated embedding both the countries and regions operational diversification become ineffective to hedge the level of currency exposure.

The second model in column 5 tested the interaction between the countries index and financial hedging practice. Across countries operational diversification and financial hedging were both found to provide minimal hedging effect to lower the exposure level at -0.0664 and -0.0708, respectively. However, the hedging effect for both variables were insignificant at p-values of 0.6731 and 0.5296. Interacting the countries index and financial hedging practice also showed insignificant hedging effect for the sample firms. However, the positive effect indicated higher exposure level during simultaneous implementation of financial hedging and countries diversification. The positive beta coefficient for the interaction term was attributable to agency problem and diversification of operation on countries with highly correlated currencies.

The third model in column 6 tested the effect of regions index and financial hedging to minimise the exposure level among the sample firms. Both the regions index and financial hedging managed to lower the exposure level by 0.3074 and 0.0154 percent, respectively. However, the effect of financial hedging was insignificant while the regions index significantly provided hedging effect. Interacting the regions index and the financial hedging could lower the exposure level by 0.6834 with p-value of 0.0234. Hence, having regional diversification and financial hedging practice in place could provide significant minimising effect towards the currency exposure level faced by the sample firms.

The last model in column 7 included all the variables. Consistently, the regions index ($\beta=-1.1389$, p-value=0.0453) and financial hedging ($\beta=-0.2518$, p-value=0.0323) maintained their significant effect towards the exposure level. Countries index remained insignificant ($\beta=-0.1451$, p-value=0.3181). Interacting the countries index with regions index and financial hedging resulted in insignificant effect to lower the foreign currency exposure level ($\beta=-0.2744$, p-value=0.4702). In this regard, the effect of countries diversification was said to be insignificantly correlated with the regional diversification and financial hedging. Ineffective countries-based operational hedging was detrimental to the firms' risk management strategy as it failed the existing regional diversification and financial contracts to significantly hedge the firm's exposure (Chowdhry, 2002).

Hence, firms should diligently scrutinise their risk management decision as one strategy could actually alleviate the effectiveness of the other risk management moves in place.

In a nutshell, discussions on the 7 models interacting the countries index, regional index, and financial hedging indicated better risk management effect through regional diversification compared to country-level diversification. Infusing financial hedging into the operational hedging practices further enhanced the risk management effect for the sample firms.

Table 7: Effects of Financial Hedging, Operational Hedging, and Interaction Terms towards Foreign Currency Exposure

Dependent Variable: Currency Exposure							
	1	2	3	4	5	6	7
	Countries Index (As in Section 4.5.2)	Regional Index (As in Section 4.5.2)	Financial Hedging (As in Section 4.5.1)	Countries and Regions Indexes	Countries Index and Financial Hedging	Regions Index and Financial Hedging	Countries and Regions Indexes and Financial Hedging
Constant	-0.0351	-0.2902	0.0011	-0.1519	-0.3001	-0.2887	-0.2499
Countries Index	0.0958 (0.4365)	-	-	-0.331 (0.0020) ^c	-0.0664 (0.6731)	-	-0.1451 (0.3181)
Regions Index	-	-0.3229 (0.8415)	-	-0.0291 (0.9050)	-	-0.3074 (0.0784) ^a	-1.1389 (0.0453) ^b
Financial Hedging	-	-	-0.2875 (0.0000) ^c	-	-0.0708 (0.5296)	-0.0154 (0.8364)	-0.2518 (0.0323) ^b
Interaction Term of Countries Index and Regions Index	-	-	-	-0.0583 (0.9000)	-	-	1.7204 (0.0964) ^a
Interaction Term of Countries Index and Financial Hedging	-	-	-	-	0.3927 (0.1391)	-	0.8498 (0.0029) ^b
Interaction Term of Regions Index and Financial Hedging	-	-	-	-	-	-0.6834 (0.0234) ^b	-0.2744 (0.4702)

ROBUSTNESS TEST: MULTISCALE CORPORATE HEDGING

For consistency purpose, another consideration on the study of corporate hedging is the inclusion of the multiscale exposure. In Table 8, the corporate hedging practice was analysed in accordance to multiscale exposure. Discussion on the table is oriented on the specific component of the corporate hedging practice namely the financial hedging and operational hedging.

In accordance to the flow of the analysis in the previous sections, the discussion starts with the effect of financial hedging towards the multiscale currency exposure among the non-financial firms in Malaysia. At the D2 and D4 time scales, significant negative relationships were recorded between the financial hedging and multiscale currency exposure. Specifically, the beta coefficient values of -3.00 (at D2) and -1.8836 (at D4) implied that 1% increase in financial hedging intensity would reduce the level of currency exposure by 3% and 1.88%, respectively. As time domain increases from D5 to S7, financial hedging turned to exert insignificant effect to lower the effect of the currency exposure. It was concluded that the financial hedging was effective to manage short term exposure, but the effect of financial hedging became ineffective to minimise the exposure under longer time scale with low data frequency which recorded significant effect of financial hedging practice towards the foreign currency exposure among their sample firms for monthly data. Analysis on longer horizon data showed the relationship between financial hedging and foreign currency exposure had become insignificant.

The study also considers the restriction to acquire detailed information on the financial hedging practice in the study. Unavailability of a standard footnote of the actual financial derivative forced the study to represent the hedging activity by dummy variable instead of true values of financial hedges. Inability to specifically recognise the exact derivative class being used by the sample firms had made it difficult to conduct empirical examination of hedging theories (Chiang & Lin, 2007). Hence, the insignificant effect of financial hedging under longer time horizon could also be attributed to the absence of exact information of the derivative use for the study to recognise the apt period the derivatives were being used. Still, the findings were parallel to the findings of financial hedging using monthly data in the previous base analysis (Table 4).

As for operational hedging, the country index was shown to be effective to manage short term exposure and became insignificant when the time scale increases. Similarly, the region index was also found to exert insignificant effect for short term exposure. The insignificance of the operational hedging practice in this study was attributable to the minimal dispersion effect from the operational diversification practised by the sample firms. The sample firms were largely concentrated on a few countries and regions which provided lesser diversification benefits. This was supported by the proposition brought forward by Prantzalis et al. (2001) who suggested that multinational firms that practised greater network breadth tended to be less exposed to

foreign currency exposure. On the contrary, firms that were highly concentrated on a few networks (greater depth) were more likely to be exposed to the uncertainty of currency movements. The reasonings sat well with our sample firms that mostly diversified their operations on countries whose currencies were highly correlated with the Malaysian ringgit.

Subsequently, the table indicted mixed findings on the relationship between the interactive terms and foreign currency exposure. The interaction terms incorporated both the financial and operational hedging practices. The first interaction term comprised the countries and region indexes. Incorporated the countries and region indexes showed the approach was ineffective to manage both the short- and long-term exposure. The result was supported by Allayannis et al (2001) who concluded the inability of operational hedging strategy to reduce foreign exchange exposure. Meanwhile, interacting the countries index and financial hedging turned out to be detrimental as the approach increased the exposure level for both short- and long-term periods. The findings echoed similar outcome previously discussed in Table 4.19. It was supported that the countries-based operational hedging was ineffective regardless of the time scales due to the high concentration on countries with highly correlated currencies. As highly correlated currencies tended to move in the same direction, advantage of currency diversification cannot be maximised and operational hedging cannot function (Chiang & Lin, 2007).

However, the negative signages maintained across all time scale domains. The findings sat well with the short-term nature of the financial hedging as the derivatives in the hedging strategy were periodically entered for a stipulated time period. Hence, financial hedging provided protection from transactional exposure rather than economic exposure. The findings conformed to Nguyen and Faff (2003) and Chiang and Lin (2007).

Table 8: Effects of Financial Hedging and Operational Hedging towards Foreign Currency Exposure across Different Time Domains

	D2 (4-8 days)	D4 (16-32 days)	D5 (33-64 days)	D6 (65-128 days)	D7 (129-256 days)	S7
Constant	2.3061	1.4821	0.3259	2.1593	0.4742	1.3154
Countries Index	-5.5838 (0.0005) ^c	-2.9443 (0.0616) ^a	0.1857 (0.8636)	-3.3823 (0.4607)	1.7011 (0.5697)	-3.3374 (0.4604)
Regions Index	1.9109 (0.2153)	0.3751 (0.721)	-1.9239 (0.2662)	-2.7437 (0.4754)	-3.6128 (0.3769)	3.5872 (0.5761)
Financial Hedging	-3.0083 (0.0048) ^c	-1.8836 (0.0852) ^a	-0.1369 (0.8662)	-2.4387 (0.4138)	-0.1293 (0.946)	-0.8967 (0.7339)
Interaction Term of Countries Index and Regions Index	-0.6920 (0.3945)	-0.0192 (0.9771)	0.1866 (0.8192)	2.4162 (0.2382)	-0.2101 (0.8978)	-1.4762 (0.7644)
Interaction Term of Countries Index and Financial Hedging	8.7311 (0.0003) ^c	4.4544 (0.0418) ^b	0.0332 (0.9837)	5.5817 (0.3775)	-1.9731 (0.6487)	5.6368 (0.4155)
Interaction Term of Regions Index and Financial Hedging	-2.8334 (0.0882) ^a	-0.8844 (0.4738)	2.212 (0.2695)	0.3538 (0.9362)	-4.8125 (0.2901)	-4.5522 (0.5641)
R2	0.3997	0.2851	0.0647	0.1261	0.0514	0.0698

CONCLUSION

In this paper, we look at the relation between financial hedging, operational hedging and currency exposure. The elaborate discussions on both financial and operational hedging practices in the previous sections highlighted the important findings from this study. Firstly, the study managed to show the significant effects of financial hedging as a form of risk management practice among the sample firms. The findings were more novel given the preliminary analysis showed only a small fraction of the sample firms practised financial hedging. It was thus proven necessary for the sample firms and the Malaysian firms in general to further accentuate their risk management plan with appropriate financial hedging practice.

Secondly, the effect of operational hedging practice was shown to be insignificant in alleviating the currency exposure among the sample firms. Similar findings were recorded for the multiscale corporate hedging practice. Two reasonings were provided for the insignificant effect. Firstly, the insignificance of operational hedging in contrast to the significant financial hedging indicated the firms were better off with hedging strategy that focused on minimising the effect of exposure level. This was in reference to the different natures of risk alleviation effect provided by financial and operational hedging practices. Specifically, financial hedging focused on eliminating the effect of exposure while operational hedging mainly concerned on reducing the source of the exposure (Laing et al., 2020). Secondly, further investigation also showed minimal effect of operational hedging was due to concentration on only one or two countries and regions. Both conditions led to minimal and insignificant effect of the operational hedging. Additionally, the interaction terms managed to show the higher importance of regional diversification compared to the cross-countries operations. With this, the effectiveness of operational hedging was concluded as dependent on the correlation between the national and foreign currencies, well-dispersed diversification across various places, minimal agency problem, and close monitoring by the firm managers. Diversifying the firms' operations must be done on foreign countries whose currency exhibited minimal correlation with the local currency to optimise the exposure offsetting effect from the operational diversification. Another crucial point of consideration was ensuring effective management and governance in the foreign plants to minimise the potential agency problem arising from poor monitoring. Numerous financial adversities would be inflicted by the inefficiency of the main management to oversee the operation in foreign operations. One of the potential agency conflicts was the risk management strategy that benefited the individual firm manager rather than maximising the firm value. As such, agency cost was shown as a significant factor influencing the level of hedging intensity (Kumar & Rabinovitch, 2013).

REFERENCES

- Allayannis, G., & Ofek, E. (2001). Exchange Rate Exposure, Hedging, and the Use of Foreign Currency Derivatives. *Journal of International Money and Finance* 20, 273-296. [https://doi.org/10.1016/50261-5606\(00\)000050-4](https://doi.org/10.1016/50261-5606(00)000050-4)
- Ameer, R. (2010). Determinants of Corporate Hedging Practices in Malaysia. *International Business Research* 3(2), 120-130. <https://doi.org/10.5539/ibr.v3n2p120>
- Bacha, O. I., Mohamad, A., Zain, S. R. S. M., & Rasid, M. E. S. M. (2013). Foreign Exchange Exposure and Impact of Policy Switch – the Case of Malaysian Listed Firms. *Applied Economics*, 45:20, 2974-2984. <https://doi.org/10.1080/00036846.2012.684790>
- Bartram, S. M., Burns, N., & Helwege, J. (2013). Foreign Currency Exposure and Hedging: Evidence from Foreign Acquisition. *Quarterly Journal of Finance* 3(2). <https://dx.doi.org/10.2139/ssrn.1102793>
- Bartram, S. M., & Bodnar, G. M. (2012). Crossing the Lines: The Conditional Relation Between Exchange Rate Exposure and Stock Returns in Emerging and Developed Markets. *Journal of International Money and Finance*, 31(4), 766-792. <https://dx.doi.org/10.2139/ssrn.1983215>
- Biplob, H., Abdullah, M. F., & Hossain, G. M. S. (2022). An Islamic Debt and Wealth Management Framework in the Context of Malaysia. *The Journal of Muamalat and Islamic Finance Research*, 19(2), 41 – 57. <https://doi.org/10.33102/jmifr.v19i2.4600>
- Bodnar, G. M., & Gentry, W. M. (1993). Exchange Rate Exposure and Industry Characteristics: Evidence from Canada, Japan, and the USA. *Journal of International Money and Finance* 12, 29-45. [https://doi.org/10.1016/0261-5606\(93\)900008-7](https://doi.org/10.1016/0261-5606(93)900008-7)
- Bodnar, G. M., & Wong, M. H. F. (2003). Estimating Exchange Rate Exposure: Issues in Model Structure. *Financial Management* 32, 35-67. <https://doi.org/10.2307/3666203>
- Chaudhry, N. J., Mehmood, M. S., & Mehmood, A. (2014). Determinants of Corporate Hedging Policies and Derivatives Usage in Risk Management Practices of Non-Financial Firms. *Munich Personal RePEc Archive Paper*, 57562. <https://doi.org/10.4236/ojbm.2022.106160>
- Clark, E., & Judge, A. (2008). The Determinants of Foreign Currency Hedging: Does Foreign Currency Debt Induce a Bias? *European Financial Management* 14(3), 445-469. <https://doi.org/10.1111/j.1468-036x.2007.00360.x>
- Clark, E., & Mefteh, S. (2011). Asymmetric Foreign Currency Exposures and Derivatives Use: Evidence from France. *Journal of International Management and Accounting* 22 (1). <https://doi.org/10.1111/j.1467-646x.2010.01044.x>

- Chong, L. L., Chang, X. J., & Tan, S. H. (2013). Determinants of Corporate Foreign Exchange Risk Hedging. *Managerial Finance* 40(2), 176-188. <https://doi.org/0.1108/mF-02-2-13-0041>
- Fok, R. C. W., Carroll, C., & Chiou, M. C. (1997). Determinants of Corporate Hedging and Derivatives: A Revisit. *Journal of Economics and Business* 49, 569-585. [https://doi.org/10.1016/S0148-6195\(97\)00040-4](https://doi.org/10.1016/S0148-6195(97)00040-4)
- Hu, C., & Wang, P. (2006). The Determinants of Foreign Currency Hedging – Evidence from Hong Kong Non-Financial Firms. *Asia-Pacific Financial Markets* 12, 91-107. <https://doi.org/10.1007/s0690-006-9014-9>
- Jorion, P. (1990). The Pricing of Exchange rate in Stock Market. *The Journal of Financial and Quantitative Analysis* 26(3), 363-376. <https://dx.doi.org/10.1086/296510>
- Marshall, A., Kemmit, M., & Pinto, H. (2012). The Determinants of Foreign Exchange Hedging in Alternative Investment Market Firms. *The European Journal of Finance* 19(2), 89-111. <https://doi.org/10.1080/351847x.2012.659267>
- Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review* 48(3), 261-297. <https://doi.org/10.4236/me.2011.22022>
- Nguyen, H., Faff, R., & Marshall, A. (2007). Exchange Rate Exposure, foreign Currency Derivatives and the Introduction of the Euro: French Evidence. *International Review of Economics and Finance* 16, 563-577. <https://doi.org/10.16/jref.2006.01.002>
- Parsley, D. C., & Popper, H. A. (2006). Exchange Rate Pegs and Exchange Rate Exposure in East and South East Asia. *Journal of International Money and Finance* 25, 992-1009. <https://doi.org/10.2307/1061213>
- Seok, S. T., Kim, T. H., Cho, H., & Kim, T. J. (2020). Determinants of Hedging and Their Impact of Firm Value and Risk: After Controlling for Endogeneity using a Two-stage Analysis. *Journal of Korea Trade* 24(1), 1 – 34. <https://doi.org/10.35611/jkt.2020.24.1.1>
- Spano, M. (2004). Determinants of Hedging and Its Effects on Investment and Debt. *Journal of Corporate Finance* 10, 175-197. [https://doi.org/10.1016/S0929-1199\(02\)00037-8](https://doi.org/10.1016/S0929-1199(02)00037-8)
- Smith, C. W., & Stulz, R. M. (1985). The Determinants of Firms' Hedging Policies. *The Journal of Financial and Qualitative Analysis* 20(4), 391-405. <https://dx.doi.org/10.2307/2330757>

- Sprcic, D. M., & Sevic, Z. (2012). Determinants of Corporate Hedging Decision: Evidence from Croatian and Slovenian companies. *Research in International Business and Finance* 26, 1-25. <https://doi.org/j.ribaf.2011.05.001>
- Ravindran, R., & Soroush, K. A. (2015). Influence of Macroeconomics Variables on Exchange Rates. *Journal of Economics, Business and Management* 3(2). <https://doi.org/10.7763/JOEBM.2015.V3-194>
- Ritschl, A. (2008). Eichengreen B: Global Imbalances and the Lessons of Bretton Woods. *Journal Economics* 94, 195-197. <https://doi.org/10.1007/S00712-008-0009-2>
- Yip, W. H., & Nguyen, H. (2012). Exchange Rate Exposure and the Use of Foreign Currency Derivatives in the Australian Resources Sector. *Journal of Multinational Financial Management*, 22, 151-167. <https://doi.org/10.1016/J.MULFIN.2012.06.003>

CONTENT ANALYSIS OF FACEBOOK ENGAGEMENT IN MALAYSIAN MINISTRY”

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Abstract

This research explores the dynamics of Facebook engagement within the Ministry in Malaysia, focusing on its objectives, strategies, and outcomes. In the backdrop of the evolving role of social media, particularly Facebook, in public administration, the study aims to understand the significance of leveraging such platforms for communication and information dissemination, especially in the context of public. This research questions aim to unravel the primary goals and objectives of the ministry's Facebook page, as well as identify the types of content that generate the most audience engagement. The main objectives of the research are to investigate the use of Facebook in the Ministry and to analyze the engagement dynamics between the ministry and the public. The significance of this research lies in its contribution to understanding the engagement strategies employed by the Ministry on Facebook. The methodology involves a content analysis of every post from January 2023 to June 2023, collecting data on likes, shares, comments, and post characteristics. The sample period focuses on posts within the specified timeframe, providing a comprehensive examination of the Ministry engagement during this period.

Keyword: Facebook, Engagement, Public, Ministry, Malaysia

INTRODUCTION

In the age of digital interconnection, social media platforms have become powerful tools for public communication and engagement. Governments throughout have promptly acknowledged the potential of these platforms, with organisations such as Malaysia's Ministry aggressively utilising Facebook to make connections with citizens, provide information, and foster meaningful debate.

This research conducts a thorough examination of the Ministry Facebook interaction, revealing the tactics used by the Ministry to communicate with Malaysian individuals and shape of the communication and digital discussions. This research provides significant insights on the Ministry's communication tactics, its intended audience, and the general effectiveness of its social media presence.

This study is highly relevant as it specifically examines a crucial communication and digital entity in a rapidly advancing country. An analysis of the Ministry of Home Affairs' social media communication reveals the complex connection between economic policy and public engagement in Malaysian content. Additionally, it

provides valuable insights that can assist other government agencies in improving their social media strategies and enhancing communication with citizens.

The main objective of this research is to enhance our understanding of how the Ministry activity using Facebook to influence the communication and digital discourse in Malaysia. This research seeks to uncover the tactics used by the Ministry to engage with citizens, promote economic projects, and traverse the ever-changing digital world by carefully analysing their social media communication.

1.1 Statement Problem

This study investigates the extent to which the Ministry uses Facebook to engage with citizens, analyzing the content and interaction patterns of their posts.

1.2 Research Question

The researcher will analyse the posts on the Ministry official Facebook page within six months to get the answers to the following questions.

1. What are the primary goals and objectives of the Ministry Facebook page?
2. What types of content on the Ministry of Communication and Digital's Facebook pages generate the most audience engagement (likes, shares, comments)?

1.3 Research Objective

The main objectives of this research as following:

1. To investigate the use of Facebook in the Ministry
2. To investigate the engagement between the Ministry and the audience.

1.4 Significance of Research

This research holds significant value due to its diverse nature. Examining the study questions about the main aims and objectives of the Ministry page yields valuable insights into the strategic communication goals of a government agency. Comprehending these objectives is essential for assessing the Ministry's priorities, public relations tactics, and its overarching mission in the digital age. Furthermore, it is crucial to investigate the types of content that elicit the highest level of audience participation on the Ministry of Communication and Digital Facebook page to enhance communication tactics. Analysing the content that elicits a strong response from the audience, as quantified by the number of likes, shares, and comments, allows the Ministry to enhance its messaging, guaranteeing that it corresponds to the public's interests and concerns. This understanding is crucial in improving the efficiency of social media communication and promoting meaningful interaction between the government and its constituents.

LITERATURE REVIEW

2.1 Social Media and Government

Social media encompasses many digital platforms and tools, including Facebook, which are increasingly employed for public health communication (Heldman, 2013). Health organisations globally utilise social media platforms, particularly Facebook, as the main method of alternative communication channels to distribute health messages, carry out disease surveillance, raise awareness about health, and address public health issues to the general population (Lwin M.O., 2018). Facebook, or FB, has emerged as a powerful platform that has several advantages over conventional communication routes. According to McConnell E. (2018), it has proven to be an efficient and economical method for disseminating health messages, allowing for the specific targeting of marginalised groups to enhance public health interventions. In recent times, there has been an increasing trend in Malaysia where the population is more inclined to search for health information online, particularly regarding personal health difficulties, such as Covid-19. Local studies have provided evidence suggesting that the public perceives the information provided as valuable and reliable. Consequently, people are more likely to seek direct advice from healthcare professionals about their health concerns through social media (MCMC, 2017). The increase in people searching for health information online and the abundance of unauthorised health websites and social media accounts that spread inaccurate health information while endorsing unproven alternative medical products and unregistered private health services have forced health organisations to engage with internet users on social media platforms in a targeted and effective manner (MOH Malaysia Guidelines For The Use of Social Media among Health Care Providers, 2018). Moreover, there is evidence suggesting that different technical factors, such as the characteristics of health information, the characteristics of posts, the timing of posts, marketing elements, as well as individual factors like socio-demographic circumstances, Internet literacy, and educational background, have a substantial impact on the level of engagement of Internet users on social media platforms (Card K.G., 2018). The objective of this study was to improve the interchange of information between the Ministry of Health, Malaysia and Facebook users. The final purpose was to enhance health literacy by effectively sharing and consuming information. The findings of this study could aid health organisations in Malaysia and beyond in improving their health communication strategies on social media platforms. Moreover, it could inspire health authorities to actively interact with their online followers by creating more impactful content.

Engagement, in the context of the current technological era, refers to the mutual benefits obtained by health organisations and internet users (Neiger B.L., 2013). The main goal of academics and health promoters was to improve the efficiency of health

information dissemination by health organisations by encouraging active engagement of internet users on social media platforms. This was accomplished by placing a strong emphasis on engaging with users through social media platforms. Engagement can be enhanced by utilising the potential of viral reach (through sharing), implementing effective appraisal (through liking), and encouraging message debate (through commenting) (Keller P.A., 2008). The observed interacting behaviours were influenced by four main factors: authority, privacy, evidence, and incentive appeals. The aforementioned characteristics have a crucial role in influencing individuals' interpretation of health information (Fritch J.W., 2001). Moreover, there is evidence suggesting that different technical factors, such as the characteristics of health information, the characteristics of posts, the timing of posts, marketing elements, as well as individual factors like socio-demographic circumstances, Internet literacy, and educational background, have a substantial impact on the level of engagement of Internet users on social media platforms (Card K.G., 2018). The objective of this study was to improve the interchange of information between the Ministry of Health, Malaysia and Facebook users. The final purpose was to enhance health literacy by effectively sharing and consuming information. The findings of this study could aid health organisations in Malaysia and beyond in improving their health communication strategies on social media platforms. Moreover, it could inspire health authorities to actively interact with their online followers by creating more impactful content.

2.2 Facebook and Government

Facebook is one of the most popular social media in the world. As a social media, Facebook is a media cyber that is a classification of new media being developed in the study of Communication Science today. Facebook was founded by Mark Zuckerberg under the alias "The Facebook" in February 2004 (The Guardian, 12 December 2023). Users can also use Facebook anytime. They can access it easily through gadgets (mobile phones), computers, and laptops. Users can also make friends with people they know or do not know on Facebook. As the leading social network in the world, based on monthly active users (MAU), the Facebook network had over 2.9 billion active users in the middle of January 2023 (Data Reportal, 12 December 2023). Since its founding in 2004 to 2023, Facebook has undergone many company structure and technology changes.

Social media, also known as Socmed, is extensively utilised and has now become a crucial component of public discourse and communication in contemporary culture. Social media has become an amusing addition that is deeply ingrained in almost every area of daily life (Wharton 2019). The escalating prevalence of social media usage has had a profound influence on both individuals and society, establishing a new standard wherein people have immediate access to knowledge at their disposal (SimpliLearn, 2020). This is due to the pervasive integration of social media into various facets of our lives, resulting in a significant impact on our overall lifestyle. According to Wharton (2019), social media has had a significant impact on

various aspects of daily life and has been widely integrated for increased awareness. The widespread use of social media has altered the significance of information and the role of individuals. The membership of the social media page is increasing. Social media has emerged as an excellent platform for the dissemination of knowledge and has continued to improve as a means of communication and collaboration.

Social media is a widely used digital medium where individuals establish and cultivate connections. In addition to facilitating social interactions, social media serves as a platform for communication and the widespread distribution of information. According to BERNAMA (2019), Malaysians dedicate an average of five hours and 47 minutes per day to social media. This places Malaysia in the top five countries in Southeast Asia with the highest usage of mobile social media in 2019. According to the Malaysian Communications and Multimedia Commission (MCMC), in 2018, over 78% of the total population of 32 million Malaysians were actively engaged in utilizing social media. Furthermore, a significant majority of 97.3% prefer to use Facebook as their primary platform for social communication. Social media is a digital platform considered an extension of static web 2.0. It serves as a medium for enhanced connection and facilitates improved communication. People increasingly spend a significant amount of time on the Internet, using social media to obtain information and engage in conversation with others (Karakiza, 2015).

Inspired by the private sector's effective and progressive use of technology, government agencies have started incorporating social media applications to revolutionize their communication methods and service delivery to the public. This is mainly aimed at enhancing public performance, productivity, and efficiency (Androustoupoulou et al., 2019). In addition to that, the government offers round-the-clock access to information, forms, and common transactions for the public. The use of social media platforms, like blogs, Facebook, YouTube, and Twitter, extends beyond mere idle conversation or leisurely pastime. It serves as a means for government officials, specifically, to delve into the issues faced by individuals and engage with the community. Social media has become a widespread communication network that is used by people of all ages and positions in society, including teenagers, adults, and leaders. Government agencies worldwide have eagerly embraced the utilisation of social media as a means to enhance public contact and facilitate crisis management. Social media applications have the potential to improve responsiveness, impact, efficacy, and cost savings in the public sector (Tagliacozzo & Magni, 2018). The Prime Minister issued the initial declaration of the movement control order (MCO) in Malaysia on March 16, 2020. This order mandated the prohibition of large gatherings for any activity (News Straits Times, 2020).

The implementation of the Movement Control Order (MCO) by the government resulted in restrictions on physical movement and communication, particularly face-to-face interaction. Amidst the uncertainty surrounding the new epidemic, individuals are actively seeking reputable sources of information and exploring alternate means of communication. Social media has emerged as the most dependable platform, offering two-way contact and immediate responses. Governments utilise social media

extensively to mitigate public fear, confusion, discomfort, and anxiety (Chen et al., 2020). Social media's attributes, including transparency, dialogism, and involvement, provide substantial advantages in disseminating information to the general public.

During the COVID-19 epidemic, social media played a crucial role in spreading information in many countries. However, it was also associated with the widespread dissemination of false or misleading information (Teichmann et al., 2020; Thelwall & Thelwall, 2020). Dissemination of false information can lead to tumultuous situations and potentially undermine the credibility of the data (Tasnim et al., 2020). As an illustration, a significant number of Iranians lost their lives following the circulation of viral stories on social media suggesting that ingesting alcohol may cure COVID-19 (BBC news, 2020). As of March 24, 2020, the Quick Response Team in Malaysia has identified and clarified 205 instances of fake news being circulated on social media. However, the Minister of Communications and Multimedia has cautioned Malaysians to exercise caution when sharing material that has not been validated.

The COVID-19 Pandemic has led to an unprecedented surge in public engagement with government social media platforms, particularly in seeking health-related information. This work has garnered unanticipated attention, and the use of social media as a means of disseminating information has been extensive. The news media, including live conferences, direct messaging, and interactive interactions with health and government authorities, played a crucial role. Previous studies have found a significant correlation between the frequency of providing information and statements and the level of trust in those statements (Teichmann et al., 2020).

2.3 Facebook Engagement

Local governments have embraced and utilised social media to connect with the public after recognising its inherent usefulness in communication. According to Waters, Tindall, and Morton (2010), the rise in popularity of social media has led to a change in local government public relations tactics. These strategies now involve the integration of traditional websites with social media platforms. Facebook is a popular social media network regularly used by organisations (Cho, Schweickart, & Haase, 2014).

Facebook provides the most distinct opportunities for a prolonged engagement between the public and the local government among all the existing social media platforms (Ellison & Hardey, 2013). Facebook enables users to build a profile where they may share various details about themselves, including their occupations, religious and political beliefs, and preferred films and bands. On this profile, both the user and their acquaintances can share hyperlinks, images, and videos of interest. In addition, Facebook allows sending private and public messages to other users and engaging in real-time instant chat. The wide range of features offered by Facebook and the ability to create applications, groups, and fan pages contribute to its widespread popularity as a platform for online socialising (Hughes et al., 2012). One could hypothesise that Facebook users engage in social interactions in order to obtain information, such as by putting inquiries in their 'status update' or speaking

through instant messages. If individuals who use Facebook to seek or share information predominantly rely on social connection, it is possible that they prefer these methods over more intellectually challenging approaches to obtain information, such as reading newspaper articles and research papers (Hughes et al., 2012).

Facebook provides local governments with the opportunity to have a more intimate understanding of their citizens. Unlike traditional media like television, radio, and print media, which only allow for one-way communication, a two-way conversation can be sustained. By engaging in online conversation, local government can reap numerous advantages, such as gathering comments, ideas, and opinions that enhance public policies and services. Local government would have the opportunity to acquire valuable guidance and enhance the level of confidence among citizens. Furthermore, through direct interaction, citizens might better understand the local government's projects (Bonsón et al., 2017).

Social media platforms have facilitated the rise of user-generated content, enhancing socio-political discussions, amplifying the range of expressed perspectives, and enabling unrestricted dissemination of knowledge and self-expression (Bonsón et al., 2012). Facebook offers innovative platforms that facilitate the efficient engagement of communities and allow stakeholders to voice their preferences continuously. Interactions on social media platforms are two-way communication, affording frequent communication and feedback between government representatives and the public.

Designing and operating social media platforms like Facebook requires less technical skill, time, and financial resources compared to traditional websites. This is because Facebook offers free accounts and includes default dialogic features (Kim et al., 2014). Social media has expanded the potential for interpersonal and organizational communication. Researchers have analysed how Facebook contributes to the development of social capital among individuals (Ellison, Steinfield, & Lampe, 2007). In general, Facebook has provided new chances for people to interact, communicate, and have conversations with each other in ways that are distinct from what traditional websites offer.

2.4 The Malaysian Public Sector as A Content Study

Local research has offered evidence suggesting that the general public has a favourable impression of the information shared on social media, deeming it valuable and trustworthy. This positive view motivates individuals to directly seek advice from healthcare professionals through social media platforms (MCMC, 2017). The increase in people searching for health information online and the growing number of unauthorised health websites or social media accounts that share misleading health information, often with the intention of promoting unproven alternative medical products and unregistered private health services, highlights the need for health organisations to effectively and strategically interact with internet users on social media platforms. The guidelines set forward by the Ministry of Health Malaysia (2018)

underscore the importance of this need in relation to the use of social media by healthcare providers.

Engagement is a crucial measure in today's digital world, reflecting the reciprocal advantages gained by health organisations and internet users (Neiger B.L., 2013). Researchers and health promoters have focused on the concept of social media engagement, acknowledging its crucial role in improving the efficiency of health information distribution by promoting interactive behaviours among internet users. Engagement stimulation frequently entails the dissemination of content through viral means (sharing), the assessment of content effectiveness (liking), and the thoughtful consideration of messages (commenting) (Keller P.A., 2008). The interactive behaviours are impacted by four essential aspects - authority, privacy, proof, and incentive appeals - which alter users' perceptions of health information (Fritch J.W., 2001).

Research has shown that several technical factors, such as the type of health information, the content of posts, the timing of posts, marketing strategies, and individual factors like socio-demographic circumstances, internet literacy, and educational background, all have a significant impact on how engaged internet users are on social media platforms (Card K.G., 2018). Within the confines of this study, the Ministry of Health, Malaysia, and Facebook users engaged in interactions with the goal of improving health awareness by efficiently distributing and consuming information. The findings of this study possess the capacity to direct health organisations in Malaysia and worldwide, allowing them to enhance and fine-tune their health communication strategies on social media platforms. Furthermore, the study advocates for health authorities to cultivate relationships with their online audiences by creating influential and captivating posts.

METHODOLOGY

The methodology used in this research is content analysis by going through every single post from January 2023 until June 2023 in the Ministry's official Facebook page. A number of likes, shares and comments would be collected as data alongside the characteristics of every post in the period of the research. Tools that would use in this research are SPSS and Microsoft Excel. This Research focus on 3 ministry:

Ministry of Communication and Digital. Ministry of Home and Affairs and Ministry of Women, Family and Community Development.

RESULTS AND DISCUSSION

1. Ministry of Communication and Digital.

Table 1 shows the total engagement that happened on the Facebook page for the Ministry of Communication and Digital.

Table 1: Total Engagement

ENGAGEMENT	TOTAL
Post	2596
Like	115849
Comment	5101
Share	53128

Table 1 displays the level of involvement on Kementerian Komunikasi dan Digital's official Facebook page, as measured by the number of likes, comments, and shares on posts made between January 2023 and June 2023. A total of 2596 posts were analysed and categorised over a period of six months. The engagement rate based on likes is the greatest, with a cumulative total of 115,849 likes from the posts throughout the specified period. Subsequently, the number of shares reaches a commendable 52128, surpassing both the number of likes and comments to secure the second highest position. Comments are least prevalent in the posts on the official Facebook page of the Ministry of Communication and Digital.

Table 2: Four Models of Public Relations

4 Model Public Relations	N	%
Public Agency/ Publicity (One Way)	192	7.4%
Public Information (One-Way)	2381	91.7%
Two-Way Asymmetrical (Two-Way)	29	1.1%
Two-Way Symmetrical (Two-Way)	0	0.0%
Total	2596	100%

A total of 2596 posts were categorised. Among the four models of public relations, the Public Information model had the most posts (n=2381) from January 2023 to June 2023, accounting for 91.7% of the sample. The Public Information model has a much higher number of posts compared to other models. The model used in this study is Public Agency, which consisted of 192 posts, accounting for 7.4% of the total sample. The sample consisted of 29 postings, which accounted for 1.1% of the total, and followed a two-way Asymmetrical model. Regarding the two-way symmetrical

model, none of the posts adhered to the model, resulting in zero contribution to the overall percentage of the posts. (Refer to Table 1 for a comprehensive overview)

2. Ministry of Home Affairs (KDN).

Table 3 shows the total engagement that happened on the Facebook page for the Ministry of Home Affairs (KDN).

Table 3: Total Engagement

ENGAGEMENT	TOTAL
Post	559
Like	42,808
Comment	2,634
Share	2,023

Table 4 displays the level of engagement on the official Facebook page of the Ministry of Home Affairs (KDN), as measured by the number of likes, comments and shares on posts made between January 2023 and June 2023. A total of 559 posts were analyzed and categorized over a period of six months. The engagement rate based on likes was the largest, with a cumulative total of 42,808 likes from posts over the stated period. Subsequently, followed with the number of comments reached 2,634, surpassing the number of shares by 2,023. Shares are least prevalent in the posts on the official Facebook page of the Ministry of Home Affairs (KDN).

Table 4: Four Models of Public Relations

4 Model Public Relations	N	%
Public Agency/ Publicity (One Way)	15	2.7
Public Information (One-Way)	493	88.2
Two-Way Asymmetrical (Two-Way)	51	9.1
Two-Way Symmetrical (Two-Way)	0	0.0
Total	559	100

In total, 559 posts were coded. Of the Four Models of Public Relations, Public Information had the highest number of posts (n=493) from January 2023 until June 2023, which contained 88.2% of the sample. Other models only had a few posts compared to the Public Information model. The following model is Two-way Asymmetrical, which had 51 posts that covered 9.1% of the sample. Public Agency model could be found in 15 posts, making up 2.7% of the total sample. As for the Two-

way symmetrical model, no post followed the model, which did not contribute any percentage to the post's total.

3. Ministry of Women, Family Community Development.

Table 5 below shows the total engagement that happened on the Facebook page for the Ministry of Women, Family Community Development.

Table 5 Total Engagement

Engagement	Total
Post	747
Like	9040
Share	2022
Comment	708

The table 5 shows the engagement of The Ministry Women, Family and Community Development official Facebook page based on likes, comments and share on posts from January 2023 until June 2023. Total posts that were coded for the six months are 747 posts. The sum of likes, comments and share from the total of post are 9040, 2022 and 708.

Table 6 Four Models of Public Relation

4 Model Public Relations	N	%
Public Agency/ Publicity (One Way)	66	8.8%
Public Information (One-Way)	677	90.6%
Two-Way Asymmetrical (Two-Way)	0	0.0%
Two-Way Symmetrical (Two-Way)	2	0.3%
Total	747	100%

Table 6 show, in total, 747posts were coded. Of the four models of public relations, Public Information had the highest number of posts (n=677) from January 2023 until June 2023, which contained 90.6% of the sample. Other models only had a few posts compared to the Public Information model. The following model is Public Agency, which had 66 posts that covered 8.8% of the sample. As for the two-way symmetrical model could be found in 2 posts, making up 0.3% of the total sample.

CONCLUSION

To summarise, the research emphasizes the necessity for the Ministry to improve its strategic communication goals on Facebook, ensuring they align with the changing interests and concerns of the public. This necessary modification will enhance the

efficiency and impact of the Ministry's interaction with the audience, promoting a deeper connection between the Ministry and the public it serves.

Based on these three ministries that are randomly pick, Therefore Ministry should consistently enhance its strategic communication goals on Facebook to remain responsive to the changing interests and concerns of the public. The Ministry can use regular evaluations of public opinion, popular subjects, and feedback to shape its content strategy, guaranteeing its continued relevance and impact. Although Ministry is actively involved in interacting with citizens, the research emphasizes the need for improvement in enhancing two-way communication. To bridge this deficiency, engaging with public posts can enhance the Ministry's online visibility, promoting more substantial engagements with the public.

To enhance efficiency and speed up the content analysis process, creating an automated system that incorporates keyword coding for each desired attribute is strongly recommended. Using this computerized methodology, the research team may significantly diminish the need for manual labor, improve productivity, and guarantee a methodical examination of posts on the Ministry Facebook page. The system should be designed to identify and classify postings using pre-established keywords linked to specific attributes, offering a more advanced and efficient approach to data processing. Furthermore, it is crucial to regularly update and continuously monitor the system to adjust it to changing trends and ensure its long-term efficacy.

REFERENCES

Journal

- Card, K. G., Lachowsky, N. J., Armstrong, H. L., Cui, Z., Sereda, P., Carter, A., & Roth, E. A. (2018). Measuring the Impact of Knowledge of and Beliefs about HIV Pre-exposure Prophylaxis on Social Media Use among Gay, Bisexual, and Other Men Who Have Sex with Men: Cross-Sectional Survey. *JMIR Public Health and Surveillance*, 4(4),
- Chen, L., Duan, Y., Zhao, Y., & Zhou, W. (2020). "The Role of Social Media in Emergency Management: A Case Study of 2020 COVID-19 Outbreak in Wuhan, China." *International Journal of Environmental Research and Public Health*, 17(11), 4477
- Heldman, A. B., Schindelar, J., & Weaver, J. B. (2013). Social Media Engagement and Public Health Communication: Implications for Public Health Organizations Being Truly "Social". *Public Health Reviews*, 35(1),13

- Lwin, M. O., Lu, J., Sheldenkar, A., & Schulz, P. J. (2018). Strategic Uses of Facebook in Zika Outbreak Communication: Implications for the Crisis and Emergency Risk Communication Model. *International Journal of Environmental Research and Public Health*, 15(9), 1974
- McConnell, E. A., & Birkett, M. A. (2018). Must Try Harder: Evaluating the Role of Effort in Social Media Engagement for Public Health. *Health Education & Behavior*, 45(1), 5-9
- Tasnim, S., Hossain, M. M., & Mazumder, H. (2020). "Impact of Rumors and Misinformation on COVID-19 in Social Media." *Journal of Preventive Medicine and Public Health*, 53(3), 171-174
- Teichmann, L., Losada-Baltar, A., & Jiménez-Gonzalo, L. (2020). "Use of Social Media and Instant Messaging Applications in Times of Crisis: A Rapid Systematic Review." *International Journal of Environmental Research and Public Health*, 17(14), 5252
- Thelwall, M., & Thelwall, S. (2020). "Covid-19 Tweets from Politicians: Sentiment and Content Analysis of 159,991 Tweets during the Pandemic's Early Months." *Online Social Networks and Media*, 21, 100104.

Online Newspaper Article

- BERNAMA. (2019). "Malaysians Spend 5 Hours 47 Minutes Daily on Social Media." Retrieved from <https://www.bernama.com/en/general/news.php?id=1782114>
- Androutsopoulou, A., Xenakis, I., & Tryfonas, T. (2019). "Government Social Media Use for Improved Public Performance: An Empirical Study of European Union Ministries." *Government Information Quarterly*, 36(3), 368-376
- News Straits Times. (2020). "PM: Malaysia under Movement Control Order from March 18-31." Retrieved from <https://www.nst.com.my/news/nation/2020/03/576392/pm-malaysia-under-movement-control-order-march-18-31>

Webpage on a News Website

- BBC News. (2020). "Iran Coronavirus: 'Alcohol Poisoning' Kills 300 amid Fake Cure Rumours." Retrieved from <https://www.bbc.com/news/world-middle-east-51997087>

SimpliLearn. (2020). "How Social Media has Changed our Lives." Retrieved from <https://www.simplilearn.com/how-social-media-has-changed-our-lives-article>

Ministry of Health Malaysia. (2018). Guidelines for the Use of Social Media among Health Care Providers. Retrieved from <http://www.cpd.pharmacy.gov.my/wp-content/uploads/2018/10/GUIDELINES-FOR-THE-USE-OF-SOCIAL-MEDIA-AMONG-HEALTH-CARE-PROVIDERS.pdf>

Malaysian Communications and Multimedia Commission (MCMC). (2017). Internet Users Survey 2017. Retrieved from <https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/Internet-Users-Survey-2017-press-release-31-July-2017.pdf>

Wharton, T. (2019). "The Role of Social Media in Daily Life." In TechyWhales. Retrieved from <https://techywhales.com/the-role-of-social-media-in-daily-life>

Webpage With a Retrieval Date

DataReportal. (12 December 2023). "Digital 2023: Global Overview Report." Retrieved from <https://datareportal.com/reports/digital-2023-global-overview->

Report

The Guardian. (12 December 2023). "Facebook founder Mark Zuckerberg defends the company's handling of misinformation in testimony to US Congress." Retrieved from <https://www.theguardian.com/technology/2023/dec/12/facebook-mark-zuckerberg-congress-misinformation>

BEYOND EMPIRICISM: UNVEILING THE GAP OF THE MORAL AND SPIRITUAL DIMENSIONS OF MODERN WESTERN SCIENCE

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Abstract

This study explores the transformative impact of modern science and emerging technologies on our worldview and the humanities, focusing on the potential consequences of neglecting moral and spiritual dimensions in scientific endeavours. It examines the crucial role these elements play in fostering a more ethical, sustainable and holistic approach to scientific inquiry. The research provides a comprehensive overview of both natural and human sciences, as well as emerging technologies, discussing the moral and spiritual components inherent in these fields and highlighting the potential repercussions of their oversight. Through a detailed analysis, this study delves into the complexities and implications of ethical and spiritual factors in the scientific realm and emerging technologies, presenting arguments and counterarguments on pertinent issues. It also provides some basic concepts of ethical and spirituality from Islam and selected other religions. The study aims to contribute to the ongoing dialogue about the integration of moral and spiritual considerations in scientific pursuits and technological development, emphasising their significance in shaping a more responsible, inclusive and forward-thinking scientific and technological landscape.

Keywords: Modern Science, Natural Sciences, Human Sciences, Moral Elements, Spiritual Elements, Ethics in Science, Emerging Technology

INTRODUCTION

Modern western science, a common jargon among researchers worldwide that often associated with systematic approach to understanding the natural world via empirical observation, experiment and mathematical analysis (Mandic et al., 2019). This evident-based scientific method uplift values that underpinning modern science that include rationality and the pursuit of knowledge for its own sake (Whitehead, 2024). Though the exact duration of 'modern' science can be vague, it was recorded that emergence of modern science started around the seventeenth century - during the era of Galileo (Micheli, 2000), as time passes by, so is contemporary science development. Even more recent conceptual shifts that contradict earlier paradigms like Newtonianism, still considered as 'modern' science (Engelmann, 1962). Therefore, this evolution suggests that the definition of 'modern' science is not static but rather a dynamic interplay of historical and contemporary influences.

Modern western science has significantly changed how we view and interact with our surrounding. It provides us with the tools and knowledge to dissect and

understand the natural phenomena. This ability to 'understand' nature has led to remarkable advancements and discoveries in various fields such as technology, medicine and agriculture. However, this scientific progress, largely driven by an empirical or evidence-based approach, has often overlooked the moral and spiritual dimensions. These dimensions encompass ethical considerations, values and beliefs that can profoundly influence our understanding and interaction with nature. They remind us of the intrinsic value and interconnectedness of all life forms, fostering a sense of respect, awe and humility towards nature. For example, we might prioritise technological progress or economic gain over environmental protection or animal welfare. We might ignore the spiritual and cultural significance of certain natural elements or phenomena in our quest for scientific understanding. In tandem with this research, the goal of this study is to learn more about the effects of moral and spiritual components being omitted in the scientific pursuit.

METHODOLOGY

This conceptual study employs a qualitative research methodology, primarily utilising analysis of existing research in both natural and human sciences. In order to provide some basic ideas of ethical and spiritual, some selected and relevant references have been critically analysed. This approach allows for a critical examination of how moral and spiritual elements are integrated into or neglected in several scientific disciplines.

Dual Perspectives: The Natural And Human Scientific Lens

Scientific endeavour in this study covers two broad topics - natural and human science. The study of materials and processes in the universe is known as natural science and it places a strong emphasis on methodical investigation and discoveries (Miqwati et al., 2023). It spans fundamental understanding from primary to advanced levels and includes subjects like biology, chemistry and physics (Nhu, 2022). The natural sciences have consistently demonstrated their extraordinary adaptability and resilience to the ever-changing surroundings from the beginning of time. The way that natural phenomena have evolved is among the most remarkable examples of this evolution. For example, rainfall has always occurred everywhere since the beginning of time. But in recent decades, we have seen the appearance of unexpected and occasionally harmful phenomena like acid rain. Acid rain is an example of how our natural world is changing due to human activity that is widely practiced, such as automobile emissions (Mei et al., 2005; Liu et al., 2016).

The disciplines of health and human science are intertwined and concentrate on multiple aspects of human existence and welfare. Sociology, psychology and other social scientific fields are parts of the broad category of human science, which also referred as social science or humanities. Its goal is to comprehend the complexity of social structures, cultural phenomena and human interactions (Dogan & Pahre, 1990). Contrarily, health science, which includes disciplines like medicine, nursing and biomedical research, is primarily concerned with understanding human body, its

functionality and factors influencing health, illness prevention, diagnosis and treatment (Shi & Singh, 2019). Health science focuses on the biological and physiological aspects of human health, usually backed with quantitative, evidence-based methods (Creswell & Creswell, 2018), whereas human science takes a broader approach to understanding human behaviour and society, frequently using qualitative methods. Despite these distinctions, the two disciplines share some common hallmarks, especially in areas like medical sociology and health psychology, which acknowledge blend between biological, social and environmental factors all have an impact on a person's health (Cockerham, 2021).

Critical Concerns In Modern Scientific Disciplines

In the realm of natural sciences, several pressing issues have emerged that underscore the need for moral and spiritual considerations. The moral dilemma raised by genetic engineering's uses in agriculture and medicine is one prominent example. The ability to modify plant and animal genomes raises questions about the long-term ecological impacts and potential unintended consequences. The deterioration of the environment brought on by industrial activities, especially the exploitation and burning of fossil fuels, is another important problem. This has led to climate change, biodiversity loss and pollution, affecting ecosystems and human communities globally. Furthermore, issues with privacy, job displacement and the possibility of autonomous weaponry are presented by the fields of robotics and artificial intelligence, all of which call for serious ethical consideration.

Human sciences face equally complex issues that could benefit from moral and spiritual perspectives. The over-reliance on pharmaceutical interventions for mental health concerns in psychology and psychiatry frequently ignores holistic approaches that take into account an individual's spiritual and emotional well-being. The field of economics grapples with issues of wealth inequality and sustainable development, where purely profit-driven models may neglect social and environmental responsibilities. In sociology and anthropology, the tension between cultural preservation and globalisation raises questions about identity, tradition and progress. The rapid growth in digital technology has also given rise to new problems including social media addiction, online privacy leakages and the false information dissemination, all of which can negatively impact personal and societal well-being.

Generally, the neglect of moral and spiritual elements in natural and human sciences can lead to a range of potential repercussions. Among them are ignoring the more significant ethical, social and environmental implications of scientific inquiry and practice. For instance, in the absence of the spiritual principle of respect for all life forms, wildlife conservation efforts may become skewed. They can ignore the intrinsic worth of all species and the vital significance of biodiversity with the objective of focusing only on species that are valuable to humans. For example, emphasis more towards human-consumable animals and kill all dangerous animals, without considering the impacts towards the ecosystem as a whole. In human sciences, ignoring spiritual element can result in an excessively mechanistic view of human

behaviour and societies. This approach overlooks the profound influence of spiritual beliefs and practices on human life, thereby limiting our understanding of human nature and societal dynamics.

Bridging The Gap: Infusing Moral Elements Into Scientific Disciplines

Moral elements in sciences, also known as scientific ethics, encompass a broad spectrum of ethical considerations and values that underpin scientific research and its applications. These ethical standards emphasise the significance of doing research with integrity and respect by acting as a compass for scientists in their pursuit of knowledge and innovation. These may sound typical and logical, but with the rise in interrelatedness between business and industries, establishment of fine line is needed to mitigate conflicts between scientific values and business values (Reiser, 1993).

One of the core moral elements in sciences is the principle of respect for all forms of life. This includes not only human life but also animals and the wider environment. It suggests that the goal of scientific study and its applications should be to do as little harm as possible to living things and their environments. Among popular example is animal experimentation for products. Though some might argue animal testing can lead to reliable results to reflect human consumptions, but moral echoes should ring some bells as experiments can lead to some failures before achieving desirable outcomes. Thus, what might happen to those animals who considered as 'failed'? Potentially they are being disposed off, left to live a painful life or might not even survive the experiment. Though various studies showing animal experimentation can cause more harms to human, especially with misleading safety studies (Akhtar, 2015).

Utilising scientific knowledge for the good of society and the environment is another moral component of science. It highlights the ethical need for scientists to apply their findings, focusing on improving the well-being of people, communities and the environment. This entails focusing research efforts on creating sustainable technology, resolving urgent social issues, protecting the environment and advancing wellness and health. Beyond the practical use of research findings, the concept of improving society is as well crucial. In a world where knowledge is power, scientific knowledge sharing and making sure that scientific knowledge is broadly available is morally encouraged. With the help of public access to information, it can aid in bridging gaps in social, economic and educational spheres and provide communities and individuals the capacity to make educated decisions.

Neglecting these moral elements can lead to a range of harmful or unjust outcomes. For example, failure to respect all forms of life can result in unnecessary harm to animals used in research or damage to the environment. With the example of animal testing mentioned earlier, without a moral compass to steer the scientific studies, animals may be treated poorly without considering their wellbeing. In 2022, United Kingdom (UK) had released a statistics report on the number of animals being used in scientific, medical and veterinary research. From the report, there were more than 2.5 million procedures being conducted on animals in the UK, whilst being lower

by 10% than previous year (Hobson, 2023). Though the number of procedures is alarmingly high, yet nevertheless, these statistics are the result of strict regulations by the UK Home Office. To emphasise further, without moral elements being considered, there is no guarantee the procedures can be ethically conducted.

Moreover, this ethical duty implies that the use of scientific knowledge should be done cautiously. Although science has the capacity to do significant beneficial purposes, if applied improperly, it may also be detrimental or destructive. For example, nuclear physics knowledge can be utilised to garner efficient and clean energy, but it may potentially be misused to build destructive nuclear weapons. Similar to this, genetic engineering can lead to unethical actions like cloning or the breeding of designer babies, but it can also revolutionise healthcare and agriculture. Therefore, to ensure that scientific research is always benefiting of society, strict ethical rules and oversight are needed.

The integration of moral elements into modern scientific disciplines provides a robust framework for addressing the critical concerns highlighted earlier in both natural and human sciences. Ethical considerations can help mitigate the moral dilemmas posed by genetic engineering. For instance, by incorporating principles of respect for life and environmental stewardship, scientists can develop more responsible approaches to genetic modification, ensuring that potential ecological impacts and unintended consequences are thoroughly evaluated and minimised. For environmental degradation caused by industrial activities, moral elements can guide the development of sustainable practices and technologies. There are rooms for scientists and industries can work together to develop cleaner energy sources, more efficient resource utilisation methods and innovative solutions for pollution reduction and biodiversity conservation. In the field of robotics and artificial intelligence, ethical considerations can address those concerns by integrating human dignity and societal well-being into AI development, researchers can create systems that respect individual privacy, promote fair labour practices and prioritise peaceful applications over military requirements.

Bridging The Gap: Infusing Spiritual Elements Into Scientific Disciplines

Spiritual aspects are the ideals, concepts and beliefs derived from spiritual or religious traditions that are found in the scientific endeavour. The way we interpret and use science is greatly influenced by these characteristics. They frequently act as a moral or philosophical code that governs the methods and applications of scientific study. In Islam, almost all the Islamic spirituality teachings are inspired from the Quranic verses and prophetic words. The Quranic notion that man is created as the best stature and the prophetic notion that attaining the perfection of faith (*ihsan*) is the highest form of consciousnesses are two examples of the Islamic spirituality teachings which are derived from the divine sources. It should also be noted here that, spirituality in Islam is not only confined to the term *tasawwuf* in Arabic though the term *tasawwuf* is always described as representing the spirituality aspect in Islam. However, it should be noted that as the concept of Islamic spirituality is not confined to the specific definitions, the

true comprehension of Islamic spirituality concept should be based on its aims and objectives.

Among the important aims of Islamic spirituality is providing the answer for the question pertaining the permanent nature of man and his needs. All men who are born and live in this world are in the state of seeking the answer for the quest of meaning. To answer this quest, Nasr as highlighted in one of his works says that “This quest for meaning, which is as essential as the need for food and shelter is in reality the quest for the ultimate, for the Absolute, and it is as permanent a need of man as his need for nourishment” (Nasr, 1999). In addition to that, Islamic spirituality is also aimed to balance outer and inner needs. In this respect, Islamic spirituality promotes the purification of the heart and safeguarding it from any affliction and that it’s end product is the correct and harmonious relationship between man and his Creator.

Balancing outer and inner needs can only be gained when one possesses the real understanding of his self as dual nature. This particular aim is closely related to the notion of dynamic nature of one self. Soul (*nafs*) is the dynamic force which is breathed into the physical body at childbirth. It is a precious essence that differentiates the living from the dead. It is deeply connected to a sense of liberty and freedom. With this understanding, Islamic spirituality demands every single man to have a real meaning of independence which refers to a liberation of oneself from all types of animalistic soul. Not enough with that, Islamic spirituality is also aimed to have a perpetual remembrance of God or attain high awareness of Allah in his life. In this respect one is always in a state of withdrawing everything other than God. Inspiring with the notion one needs to always remember his Creator and seeks His blessings, Islamic spirituality is also aimed at the established excellent moral conduct. The excellence of ethical conduct shown outwardly is derived from excellent consciousness of self inwardly.

While non-Islamic religions like Jainism and Buddhism emphasise principles such as Ahimsa (non-violence) towards all living beings and promote self-purity through prayer and meditation (Yusop, 2023). Integrating spiritual elements in scientific endeavours leads to a holistic approach, encouraging scientists to consider ethical implications and potential impacts on society and the environment. For instance, take the field of natural sciences. Here, the spiritual notion of 'respect for all life forms' can greatly influence our approach to environmental research or wildlife conservation. The principle of 'Ahimsa' or non-violence, a fundamental tenet of Jainism and Buddha, is a case in point (Reznik et al., 2019). They believed in karma, where actions and attitudes towards other living things have consequences on them. Furthermore, the rise in vegetarianism worldwide nowadays commonly associated with personal awareness of health benefits and religions. Religions such as Hinduism, Jainism, Sikhism and Buddhism are among the religions that preach respect for all living beings and adopting non-violence, contributes towards the vegetarianism population (Hargreaves et al., 2021) Advocating for gentle and respectful treatment of all living beings, this principle has had a significant impact on Indian environmental policies and practices.

Within the human sciences, spiritual components have an important role in disciplines including sociology, psychology and anthropology. Understanding human behaviour and societies—which calls for taking into account their spiritual practices and beliefs—is frequently necessary for these disciplines. The idea of '*Tazkiyah al-nafs*,' or "self-purification," which is an essential principle of Islamic spiritual traditions, serves as a framework from an Islamic perspective. It serves as a compass for Muslims, reminding them that Allah SWT is always by their side and that they should always behave in accordance with Islamic principles (Mutholingah & Zain, 2021). This idea has been applied to mental health and therapeutic procedures, emphasising the role that spiritual components have in these domains. *Tazkiyah al-nafs* calls for reflection, accountability and a sincere desire to better one's character—all essential elements of mental health.

Consider the field of environmental science. Here, the spiritual belief in the 'interconnectedness of all life' can guide researchers to focus on studying and preserving biodiversity. This belief not only emphasises the preservation of all life forms but also enhances our understanding of the complex relationships within ecosystems. We tend to ponder how the teachings in the religions' books can relate or inspire towards scientific discoveries. For example, in Quran, one of the profound examples of science in the Quran is the description of embryonic development in the womb. The Quran mentions, "We created man from an extract of clay (12). Then placed each human as a sperm-drop in a secure place (13), Then We developed the drop into a clinging clot, then developed the clot into a lump of flesh, then developed the lump into bones, then clothed the bones with flesh, then We brought it into being as a new creation. So Blessed is Allah, the Best of Creators. (14)" (Quran 23:12-14).

In this verse, the Quran accurately describes the stages of embryonic development, using specific Arabic terms to denote the different stages. The term "*alaqah*" refers to the leech-like appearance of the embryo in the early stages of development, while "*mudghah*" refers to the somite stage when the embryo looks like a chewed lump (Deuraseh & Yaakub, 2010). This description aligns with modern embryology. For example, Dr. Keith Moore, a prominent embryologist, has written extensively on the correlation between the Quranic description of embryonic development and modern science. In his book "The Developing Human: Clinically Oriented Embryology," Dr. Moore concludes that the descriptions in the Quran cannot be based on scientific knowledge available in the 7th century and thus provides a compelling indication of divine intervention (Saadat, 2009).

From Tauhidic perspective, being the central concept of Islamic monotheism, profoundly influences how Muslim scientists approach natural and human sciences by promoting a unified view of knowledge and a purposeful understanding of the universe. This spiritual foundation provides an ethical framework, encouraging research that benefits humanity while adhering to divine principles. Moreover, Tauhid fosters a holistic approach to scientific inquiry, integrating physical and spiritual aspects, while simultaneously instilling humility in scientists by acknowledging the limitations of human understanding in the face of Allah's infinite knowledge. No

wonder Universiti Sains Islam Malaysia (USIM), being a renowned education institute, aims to harmonise modern sciences with Islamic principles as their philosophy centers on integrating *'Aqli* (rational-based) and *Naqli* (revealed) knowledge. By adopting this holistic perspective, USIM aims to produce graduates and research that are not only scientifically rigorous but also ethically grounded, addressing the complex challenges of the modern world where technological progress often outpaces moral considerations.

Spiritual elements can provide profound solutions to critical concerns in human sciences. By infusing spiritual principles into these disciplines, we can address issues like mental health, social inequality and cultural conflicts. Spiritual teachings emphasise compassion and empathy, which can guide more humane approaches to psychology and social work. For example, the practice of meditation and zikr. In the realm of education and human development, spiritual values that prioritise personal growth and self-realisation that can shape pedagogies that respect individual differences and promote holistic learning. Furthermore, spiritual elements can provide a moral compass for research in human sciences, ensuring that advancements in fields like cognitive science and behavioural economics are pursued with consideration for their broader impact on human dignity and societal well-being.

Ethical Tech Frontiers: Merging Science, Morality And Spirituality

Emerging technologies like Virtual Reality (VR), social media, Artificial Intelligence (AI), Machine Learning (ML) and the Internet of Things (IoT) have had a significant contribution on the natural and human sciences. The way we conduct research, analyse data and interact with our surroundings has been completely transformed by these technologies and as a result, numerous scientific sectors have seen substantial breakthroughs. Natural science researchers may now collect vast amounts of real-time data from the environment thanks to IoT devices. For instance, in ecology, IoT sensors are being used to monitoring, research and conservation of wildlife (Guo et al., 2015). When paired with AI and ML algorithms, this abundance of data enables scientists to see patterns and anticipate outcomes that were previously unattainable. As noted by Gretzel et al. (2015), these technologies are not only enhancing our understanding of natural phenomena but also contributing to more effective conservation efforts using complex analytics.

In Human Sciences, social media platforms have become invaluable tools for studying human behaviour, social interactions and cultural trends. Researchers may now analyse vast amounts of user-generated content to discover more about social movements, public opinion and cultural shifts. AI and ML algorithms can be used to process this data, enabling deeper analyses of human behaviour and societal dynamics. VR, on the other hand, is opening up new possibilities in fields like psychology and anthropology, allowing researchers to create immersive environments for studying human responses and cultural practices (Bailenson, 2018).

However, when moral and spiritual elements are ignored in the development and application of emerging technologies, serious ethical issues can arise. For instance,

in the field of AI and machine learning, biased algorithms have led to discriminatory practices in areas like hiring and criminal justice, undermining principles of fairness and equality (Mehrabi et al., 2021). In social media, the pursuit of engagement metrics without ethical considerations has resulted in the spread of misinformation and the exploitation of user data, infringing on privacy rights and social harmony (Allcott & Gentzkow, 2017). VR technologies, when developed without moral guidance, have been used to create immersive violent content or addictive experiences that can negatively impact mental health (Slater & Sanchez-Vives, 2016). The IoT, if not guided by ethical principles, can lead to pervasive surveillance and erosion of personal privacy (Ziegeldorf et al., 2014). These examples underscore the critical need for integrating moral and spiritual elements in the development and deployment of emerging technologies to ensure they serve humanity's best interests and uphold fundamental ethical values.

The integration of moral and spiritual elements into emerging technologies can effectively mitigate many of the ethical issues they present. Developers can design AI systems that are more open, fair and responsible by integrating values like privacy, respect for human dignity and social responsibility. For instance, embedding ethical guidelines inspired by various spiritual traditions into AI decision-making processes can help reduce bias in algorithms used for hiring or criminal justice. In the realm of social media, adopting moral frameworks that emphasise truth, compassion and community well-being can guide the development of platforms that prioritise authentic connections and information integrity over engagement metrics. For VR and IoT technologies, spiritual concepts of mindfulness and interconnectedness can inform design choices that respect users' mental health and privacy. By aligning technological advancements with moral and spiritual values, we can foster innovations that not only push the boundaries of scientific knowledge but also enhance human flourishing and societal harmony.

Scholars are increasingly agreeing that these technologies, when utilised responsibly, may make a substantial contribution to both scientific advancement and human wellbeing, notwithstanding the differences in religious beliefs. As Wong et al. (2006) and Shaw & Williams (2009) point out, the application of big data analytics and AI in various fields can lead to more informed decision-making and strategic planning.

As long as they are applied in line with Islamic teachings, technological advances are generally seen favourably from an Islamic standpoint. Islam places a great importance on knowledge, or "ilm," and encourages the study of scientific knowledge as long as it advances humankind and does not conflict with Islamic principles. As stated in the Quran, "And say: My Lord, increase me in knowledge (114)" (Quran 20:114).

Non-Islamic religions also have varying perspectives on these technologies. While some raise concerns about their potential to dehumanise society or replace human judgment with AI, many regard them as tools that may be used to benefit humanity. As an example, some Buddhist scholars argue that while these technologies

can enhance our understanding of the world, they should not distract us from the pursuit of inner wisdom and enlightenment (Vallor, 2016).

RESULTS AND DISCUSSION

There are several arguments whether the respect should go equally to all living being or not. The concept of Biocentrism (popular view among environmental ethicists), that all living creatures have values, regardless of their respective attributes (Varner, 2002). If this is the case, then what might be the appropriate punishments towards high-risk criminals since they are as well should be respected? If all living animals are equally valuable, then who can decide which animals or plants can or cannot be consumed by humans or animal predators? These moral standpoints can be complicated yet simple at the same time. They demand for careful deliberation and an understanding of the intricate relationships between all living beings. In conclusion, while the application of moral elements in sciences can be challenging, it remains essential for ensuring the responsible and ethical conduct of scientific endeavours.

There is debate concerning the inclusion of spiritual components in the scientific pursuit. Many times, critics highlight that science should be kept impartial and unaffected by spiritual or religious convictions. They argue that these beliefs are irrational and lacking empirical support, particularly in contexts where scientific validation is difficult. For instance, the presence of supernatural beings like God. Unlike the critics, the supporters of holistic-based sciences counter that science is not an isolated discipline. Its functioning within broader cultural, intellectual and spiritual contexts that shapes it. They pointed that intentionally including spiritual elements in scientific research can result in a more responsible, moral and ethical application of science. They proposed that this approach can foster harmony between people and the natural world as well as the spiritual realm by fostering a more comprehensive awareness of the universe and our place in it.

Despite the lack of intervention of moral and spiritual elements, it is undeniably there are successful features that need to be credited when it is due. For example, the world of flora has also been significantly evolving, driven primarily by biotechnology breakthroughs to meet human demands for food, feed and other products (Louwaars & Jochemsen, 2021). Fruit cultivation has been among a major area of concentration, where cutting-edge DNA modification techniques have been used to maximise yields while avoiding wastage. A good illustration of this shift is provided by the common watermelon, where it was back then, a fruit with plenty of seeds and little flesh, has become a fruit rich in flesh, with some even seedless.

Apart from that, When we investigate the lens of health and human sciences, evolutions and discoveries are not new and being researched upon extensively from time to time. With more modernised era of healthcare, the development of contemporary medical technology has also ushered in a new age of medical advancement. The greatly improved methods of managing diseases and the generally improved quality of life characterise this new era. The creation and use of more potent vaccines has been essential to this revolution in healthcare. These vaccines, which were

created using cutting-edge science and technology, strengthen immunity and serve as a barrier. They have shown helpful in preventing a wide range of illnesses, from the ordinary cold to serious ailments like cancer. It follows that between 1900 and 2021, life expectancy naturally doubled to 71 years (from 32 years) (Dattani et al., 2023). Their influence goes beyond personal health and makes a substantial contribution to humankind's general well-being. Vaccines have reduced the burden on healthcare systems and improved societal cohesion by stopping the spread of disease.

CONCLUSION

To sum up, the development of contemporary science has unquestionably transformed our comprehension of the natural world and humankind. But the constant search of factual knowledge has frequently resulted in the disregard of essential moral and spiritual components. Potential consequences of this neglect include environmental deterioration, a mechanical mindset and ethical dilemmas in scientific activity. It is critical that we incorporate moral and spiritual aspects into our scientific pursuits as we continue to expand our understanding of science and its applications, beyond only a looking at a certain angle. Similarly with the emerging technologies as inevitably evolving and influence our life. By synergising moral and spiritual attributes into scientific activities, we can ensure that science is applied in a way that improves human and environmental well-being while also being moral, sustainable and considerate to all living things.

REFERENCE

- Akhtar, A. (2015). The Flaws and Human Harms of Animal Experimentation. *Cambridge Quarterly of Healthcare Ethics*, 24(4). <https://doi.org/10.1017/S0963180115000079>
- Bailenson, J. (2018). *Experience on Demand: What Virtual Reality Is, How It Works and What It Can Do*. W. W. Norton & Company.
- Cockerham, W. C. (2021). *Medical Sociology* (14th ed.). Routledge.
- Creswell, J. W., & Creswell, J. D. (2023). *Research design: Qualitative, quantitative & mixed methods approaches* (6th ed.). Sage.
- Dattani, S., Guirao, L. R., Ritchie, H., Ospina, E. O. & Roser, M. (2023). *Life Expectancy*. Published online at [OurWorldInData.org](https://ourworldindata.org). Retrieved from: <https://ourworldindata.org/life-expectancy> [Online Resource]
- Deuraseh, N. & Yaakub, N. (2010). The Development of Human Embryo in the Quran, Surah Al-Mu'minun (23): 12-14. *European Journal of Scientific Research* (2010) 48(1) 155-159.

- Dogan, M., & Pahre, R. (1990). *Creative Marginality: Innovation at the Intersections of Social Sciences*. Westview Press.
- Engelmann, H. O., (1962). (4) What is Modern Science. *Sociological Quarterly*, doi: 10.1111/J.1533-8525.1962.TB01542.X
- Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015). Smart tourism: foundations and developments. *Electronic Markets*, 25(3), 179-188.
- Guo, S., Qiang, M., Luan, X., Xu, P., He, G., Yin, X., Xi, L., Jin, X., Shao, J., Chen, X., Fang, D., & Li, B. (2015). The application of the Internet of Things to animal ecology. *Integrative Zoology*, 10(6), 572–578. <https://doi.org/10.1111/1749-4877.12162>
- Hargreaves, S. M., Raposo, A., Saraiva, A., & Zandonadi, R. P. (2021). Vegetarian diet: An overview through the perspective of quality of life domains. In *International Journal of Environmental Research and Public Health* (Vol. 18, Issue 8). <https://doi.org/10.3390/ijerph18084067>
- Hobson, H. (2023). *Animal Research Statistics for Great Britain, 2022*. Retrieved from: <https://www.understandinganimalresearch.org.uk/news/animal-research-statistics-for-great-britain-2022> [Online Resource]
- Liu L, Zhang X Y, Lu X H. (2016). The composition, seasonal variation and potential sources of the atmospheric wet sulfur (S) and nitrogen (N) deposition in the southwest of China. *Environmental Science and Pollution Research*, 23(7): 6363–6375.
- Louwaars, N., & Jochemsen, H. (2021). An ethical and societal analysis for biotechnological methods in plant breeding. *Agronomy*, 11(6). <https://doi.org/10.3390/agronomy11061183>
- Mandić, L.; Kotnik-Karuza, D. & Deković, M. S., (2019). (3) Methodological approach to modern physics experiments.
- Mei, Z. L., Liu, Z. Q., Liu, L., et al. (2005). Analysis on the variation of acidity and chemical compositions of rainwater in Chengdu Urban Area. *Sichuan Environment*, 24(3): 52–55.
- Micheli, A. D., (2000). (3) Cuándo nació la ciencia moderna. *Revista Portuguesa De Pneumologia*
- Miqwati M., Susilowati. E. & Moonik., J. (2023). Implementasi pembelajaran berdiferensiasi untuk meningkatkan hasil belajar ilmu pengetahuan alam di sekolah dasar. *Jurnal Pendidikan Sekolah Dasar*, doi: 10.33830/penaanda.v1i1.4997

- Mutholingah, S., & Zain, B. (2021). Metode Penyucian Jiwa (Tazkiyah Al-Nafs) Dan Implikasinya Bagi Pendidikan Agama Islam. *Journal TA'LIMUNA*, 10(1). <https://doi.org/10.32478/talimuna.v10i1.662>
- Nasr, Seyyed Hossein, *Sufi Essays*, Chicago: Kazi Publication, 1999, p.25.
- Như D. T. N., Nga N. T. T., Thùy A. B., (2022). (4) Hướng dẫn giáo viên thiết kế kế hoạch bài dạy môn khoa học tự nhiên theo hướng phát triển phẩm chất, năng lực học sinh. doi: 10.15625/vap.2022.0107
- Reiser, S. (1993). *The Ethics Movement in the Biological Sciences: A New Voyage of Discovery. The Ethical Dimensions of the Biological Sciences*, New York: Cambridge University Press.
- Reznik, S. V., Dekhnich, O. V., Kutomanov, S. A., Maidansky, M. A., & Filatova, Y. S. (2019). "Ahimsa" principle in the religious and cultural practices of ancient and contemporary India. *Humanities and Social Sciences Reviews*, 7(5). <https://doi.org/10.18510/hssr.2019.75107>
- Ruslanovich, D. A., (2014). (4) To the question of the definition of the modern science term.
- Saadat, S. (2009). Human embryology and the holy quran: an overview. *International Journal of Health Sciences*, 3(1).
- Shaw, G., & Williams, A. (2009). Knowledge transfer and management in tourism organisations: An emerging research agenda. *Tourism Management*, 30(3), 325-335.
- Shi, L., & Singh, D. A. (2019). *Essentials of the U.S. health care system* (5th ed.). Burlington, Ma Jones & Bartlett Learning.
- Vallor, S. (2016). *Technology and the virtues: A philosophical guide to a future worth wanting*. Oxford University Press.
- Varner, G. (2002). Biocentric Individualism. *Environmental Ethics: What Really Matters, What Really Works*, Oxford: Oxford University Press, pp. 108-120.
- Whitehead, A. N., (2024). *The Origins of Modern Science*. Lietuvos istorijos studijos, doi: 10.15388/lis.2024.53.6
- Wong, P. C., Shen, H. W., Johnson, C. R., Chen, C., & Ross, R. B. (2006). The top 10 challenges in extreme-scale visual analytics. *IEEE Computer Graphics and Applications*, 32(4), 63-67.
- Yusop, Y. M., Saleh, N. D. M., Othman, W. N. W., Zainudin, Z. N., (2023). Spiritual Elements in Counseling Process: Counselors' Perspective. *International Journal of Academic Research in Progressive Education and Development*, doi: 10.6007/ijarped/v12-i3/19329

EXPLORING THE VERB "أَخَذَ" IN ARABIC IDIOMATIC PHRASES

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Abstract

This seminar paper investigates the patterns and contextual meanings of the verb "أَخَذَ" within Arabic idiomatic phrases. The study aims to explore how this verb operates across various idiomatic expressions and to identify the patterns that define its usage in different contexts. Through qualitative approach and content analysis, the research reveals that "أَخَذَ" appears in six distinct idiomatic patterns, each contributing unique semantic nuances. The findings demonstrate how the verb conveys a range of meanings beyond its literal sense, reflecting the cultural and social contexts of Arabic-speaking communities. This analysis not only enhances our understanding of "أَخَذَ" but also underscores the broader significance of idiomatic expressions in conveying cultural values and beliefs. The paper offers valuable insights into the complexity of Arabic idiomatic language and highlights the role of idiomatic expressions in bridging linguistic and cultural heritage.

Keywords: Idioms; Arabic; language; verbs; communication.

INTRODUCTION

The Arabic language, renowned for its rich tapestry of idiomatic expressions, frequently employs verbs in ways that transcend their literal meanings. One such verb is "أَخَذَ", which, in various idiomatic contexts, reveals diverse and intricate patterns of usage. Understanding the patterns and contextual meanings of "أَخَذَ" is essential for both linguistic analysis and practical application in Arabic studies.

Idiomatic expressions are a crucial component of any language, often encapsulating cultural nuances and complex meanings that cannot be easily inferred from the individual words alone (Miller, 2011). In Arabic, idiomatic phrases frequently use the verb "أَخَذَ" to convey various abstract concepts, such as acquiring knowledge, assuming responsibilities, or experiencing states of being. The versatility of "أَخَذَ" in these contexts reflects its central role in Arabic idiomatic speech and its ability to adapt to different semantic fields (Al-Farsi, 2009).

Previous studies have highlighted the importance of verbs in idiomatic expressions and their impact on semantic interpretation (Fattah, 2014). For instance, Al-Jabri (2016) has demonstrated how the contextual meaning of verbs can shift dramatically depending on the surrounding words and cultural context. Similarly,

research by El-Mahdy (2012) emphasizes that understanding these patterns is key to mastering idiomatic usage and appreciating the subtleties of Arabic expression.

This paper aims to provide a fundamental analysis of the patterns and contextual meanings of the verb "أخذ" within Arabic idiomatic phrases. By examining various idiomatic usages, this study will elucidate how "أخذ" functions in different contexts and contributes to the rich landscape of Arabic idiomatic expression. The findings will not only enhance our understanding of this particular verb but also offer insights into the broader dynamics of idiomatic language use in Arabic.

THE FUNCTIONS OF ARABIC IDIOMATIC PHRASES IN COMMUNICATION

Arabic idiomatic phrases serve various functions in communication, enriching the language and adding layers of meaning. The functions of Arabic idiomatic phrases in communication can be understood through various linguistic and sociocultural perspectives. Incorporating idiomatic phrases effectively requires an understanding of their meanings and contexts to ensure appropriate and impactful use. Some of the functions are:

1. Expressiveness:

Idiomatic phrases often provide a richer, more vivid means of expression compared to literal language. They can encapsulate complex ideas and emotions in a single phrase. For instance, the Arabic idiom "كأنك ترى الشمس" (as if you are seeing the sun) is used to express clear and undeniable evidence of something (Nahas, 2005). Such idioms can enhance expressiveness and make communication more impactful.

2. Cultural Identity:

Idioms are deeply embedded in cultural contexts and reflect the values and traditions of Arabic-speaking communities. Using idioms helps speakers to convey their cultural identity and engage with others who share similar cultural backgrounds. For example, the idiom "يد واحدة لا تصفق" (one hand cannot clap) illustrates the value of cooperation and mutual support in Arab culture (El-Hakim, 2010).

3. Economy of Language:

Idiomatic expressions allow speakers to communicate complex ideas efficiently. This economy of language is crucial in both spoken and written forms of communication. For example, the idiom "أحسن من زهور الربيع" (better than spring flowers) succinctly praises something or someone, avoiding lengthy explanations (Miller, 2012).

4. Social Nuance:

Idioms often carry social implications that can add nuance to communication. They can be used to convey politeness, humor, or irony. For instance, "يعيش ويتعلم" (live and learn) can be used to address someone's mistakes in a less confrontational way (Abdullah, 2018).

5. Cognitive Shortcuts:

Idioms can act as cognitive shortcuts, making communication more efficient by summarizing complex ideas quickly. This function is particularly useful in everyday conversations and storytelling. For instance, "أضغاث أحلام" (mixed dreams) can quickly describe confusing or nonsensical ideas or situations (Joubran, 2015).

6. Enhancement of Communication:

The use of idiomatic expressions can make language more engaging and vivid. They often carry metaphorical meanings that add color and depth to communication. For example, "مثل السوسة في الثوب" (like a worm in the cloth) can describe a persistent problem or issue in a compelling way (Sadiq, 2017).

METHODOLOGY

This focused study utilizes a qualitative approach and content analysis to investigate the use of the verb "أخذ" in Arabic idiomatic phrases. The goals are to elucidate the contextual meanings of this verb within idiomatic expressions and to identify patterns in its usage. The research analyzes a sample of 30 idiomatic phrases selected from the المعجم السياقي للتعبيرات الاصطلاحية (Contextual Dictionary of Idiomatic Expressions), which serves as the primary reference. This dictionary includes over two thousand commonly used idiomatic expressions, spanning both classical and modern Arabic as well as terms adopted from other languages that have become integrated into Arabic.

PATTERNS AND CONTEXTUAL MEANINGS OF THE VERB "أخذ" IN ARABIC IDIOMATIC PHRASES

Pattern I:

أخذ + بـ

IDIOMATIC PHRASES	CONTEXTUAL MEANING
أخذ بعين الاعتبار	taken into consideration, taken into account, to factor something into one's decision-making or evaluation process.
أخذ بالأمر	Obligated to, compelled to it, to impose a requirement or duty on someone.
أخذ بأسباب	took the means, made use of the means.

	to employ or utilize the necessary resources or methods to achieve a goal.
أخذ بأنفاس / بختاق / برقبة	took by the breath, holding someone by the throat or controlling them tightly, grabbing or restraining someone by their neck, a grip or control around someone's neck, a form of physical control or restraint.
أخذ بالقلوب والأبصار	captured the hearts and the eyes, to captivate or deeply impress people both emotionally and visually.
أخذ بزمام	took the reins, taking control or assuming leadership of a situation or organization.
أخذ بعضه برقاب بعض	to express ideas about things that are closely interconnected or intertwined.
أخذ بناصره	took his side, supported him, offering support or siding with someone in a situation.
أخذ بيد (فلان)	took someone's hand, to guide, lead, or support someone, often implying assistance or direction in a literal or figurative sense.
أخذ بناصية	took by the forelock, took by the hair, taking someone by the front or guiding them firmly, sometimes used metaphorically to suggest taking control or leadership.
أخذ بناصره	took his side, supported him, offering support or siding with someone in a situation.
أخذ بيد (فلان)	took someone's hand, to guide, lead, or support someone, often implying assistance or direction in a literal or figurative sense.

Pattern II:

أخذ + على

IDIOMATIC PHRASES	CONTEXTUAL MEANING
أخذ على عاتقه	to take responsibility or charge of a task or duty.

أخذ على فم	To indicate that someone was restricted or obstructed from expressing themselves verbally.
أخذ على يده	To prevent someone from doing what he wants or stop him from doing what he
أخذ عليه	To held against him, to criticise him for, It typically means to take issue with someone for something they have done or to reproach them for a particular action or behavior.
أخذ عليه الأرض	narrowed the ways for him, restricted his options, making someone's circumstances more difficult by limiting their choices or opportunities.
أخذ عليه الطريق	prevented him through looting and plundering, restrained him by means of theft and robbery. It implies that someone was obstructed or deprived of something through acts of stealing and forcibly taking property.

Pattern III:

أخذ + عن

IDIOMATIC PHRASES	CONTEXTUAL MEANING
أخذ عنه	to acquire knowledge, information, or teachings from someone, to narrate, to transmit.

Pattern IV:

أخذ + في

IDIOMATIC PHRASES	CONTEXTUAL MEANING
أخذ في حسابه	Took into account, paid attention to it, considered, to factor something into one's plans or considerations.
أخذ في	started on, began to, to indicate the commencement of an action or activity.
أخذ في طريقه	To apply or impose the same kind of treatment or handling to another person

	or situation.
أخذت فيه الخمر/الشراب	became drunk or was heavily influenced by alcohol.

Pattern V:

أخذ + اسم

IDIOMATIC PHRASES	CONTEXTUAL MEANING
أَخَذَ أُهْبَتَهُ	prepared himself, got ready, getting ready for a task or situation.
أَخَذَ أَخْذَ/مَأْخَذَ	adopted his morals or emulated his character, embodying or taking on the qualities or virtues of someone else.
أَخَذَ الْأَمْرُ مَجْرَاهُ	the matter took its course, the situation unfolded as expected, things proceeded according to how they were naturally expected to proceed.
أَخَذَ حِذْرَهُ	took precautions, to be cautious or careful, usually in a situation that requires attention to avoid potential risks or problems.
أَخَذَ طَرِيقَهُ إِلَى	headed towards, to begin traveling or moving towards a specific destination or goal.
أَخَذَ مَكَانَهُ/مَجْلِسَهُ/مَقْعَدَهُ	Sat, took a seat.
أَخَذَ نَفْسَهُ بِكَذَا.	to make a person bound or required to fulfill a particular duty or responsibility.

Pattern VI:

أخذ + اسم + بـ

IDIOMATIC PHRASES	CONTEXTUAL MEANING
أَخَذَ (كَذَا) بِيَدِهِ	to physically guide or lead someone, taking control of a situation or directing someone, resorted to force and violence.
أَخَذَهُ بِـ	To punish, to reprimand, to administer a penalty or corrective measure for a wrongdoing.

أخذه بلسانه	To criticise, to blame, A strong form of criticism, often involving severe disapproval or denigration.
أخذ بعضه برقاب بعض	To express ideas about things that are closely interconnected or intertwined.

CONCLUSION

In conclusion, this seminar paper has explored the various patterns and contextual meanings of the verb "أخذ" in Arabic idiomatic phrases. The analysis revealed that "أخذ" manifests in six distinct patterns, each contributing to a nuanced understanding of its use within different idiomatic contexts. These patterns illustrate the verb's versatility and its role in shaping meaning through idiomatic expression. The contextual meaning of the verb أخذ in Arabic idiomatic phrases is quite versatile and reflects various nuances depending on its usage. The verb generally means "to take" or "to seize" in its literal sense, but in idiomatic expressions, it assumes a range of figurative meanings that can vary widely based on the context. Overall, the contextual meanings of أخذ in idiomatic phrases reveal its adaptability and the way it conveys various abstract concepts, emotions, and actions beyond its literal translation. Understanding these nuances requires familiarity with both the idiomatic expressions and the cultural contexts in which they are used. Understanding these variations enhances our comprehension of how "أخذ" operates within the Arabic language, highlighting its significance in conveying complex ideas and cultural nuances. Further research could expand on these findings by examining additional contexts or comparative studies with other Arabic verbs.

REFERENCES

- Abdullah, M. (2018). *Social Dynamics and Idiomatic Usage in Arabic*. Journal of Arabic Linguistics, 22(2), 56-71.
- Al-Farsi, H. (2009). *Arabic Idioms and their Cultural Significance*. University Press.
- Al-Jabri, M. (2016). *Contextual Meaning of Verbs in Arabic Idioms*. Language and Linguistics Journal, 12(3), 45-60.
- El-Hakim, A. (2010). *Cultural Reflections in Arabic Idiomatic Expressions*. Middle Eastern Studies, 36(4), 89-104.
- El-Mahdy, A. (2012). *Patterns of Semantic Change in Arabic Verbs*. Studies in Arabic Linguistics, 8(1), 22-38.

- Fattah, S. (2014). *The Role of Verbs in Arabic Idiomatic Expressions*. *Arabic Linguistics Review*, 10(2), 112-128.
- Joubran, H. (2015). *Cognitive Shortcuts and Idiomatic Expressions in Arabic*. *Cognitive Linguistics Research*, 18(1), 23-39.
- Miller, K. (2012). *The Efficiency of Idiomatic Language in Arabic Communication*. *Language and Society*, 29(3), 112-127.
- Miller, J. (2011). *Understanding Idiomatic Expressions: A Linguistic Perspective*. Cambridge University Press.
- Nahas, H. (2005). *Arabic Idioms: An Insight into Arabic Cultural Heritage*. *Journal of Middle Eastern Languages and Linguistics*, 12(1), 45-60.
- Sadiq, M. (2017). *The Role of Metaphor and Idiomatic Expressions in Enhancing Arabic Communication*. *Journal of Literary Studies*, 31(4), 82-98.
- Sienny, M, Hussein, M.A, Al-Doush, S.A.A. (1996). *A Contextual Dictionary of Idioms*. Maktabah Lubnan.

ANALYSING THE EFFECT OF SETTLEMENT AGREEMENT IN CLAIMING LIQUIDATED ASCERTAINED DAMAGES BY HOUSE BUYERS

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Abstract

One of the important protections granted to house buyers under the Housing Development (Control and Licensing) Act 1966 ('HDA') is the right to claim for liquidated ascertained damages (LAD) for late delivery of houses. This right is clearly provided in the statutory contract between the purchasers and developers which enables the purchasers to claim for damages for any delay in the delivery of vacant possession at the daily rate of 10% per annum of the property purchase price. Despite the statutory obligations to pay for the LAD, some developers decline to pay the LAD while others resort to settlement amount instead of actual claims. The settlement agreement is a desirable alternative for certain house buyers who want to avoid the trouble of taking their claim to court or to the tribunal. Through doctrinal legal research approach, this study analyses the validity and effect of settlement agreement on the rights of house buyers in claiming liquidated ascertained damages. Findings from the analysis will be able to highlight the importance of understanding the implications of a settlement agreement because it can significantly limit house buyers' ability to pursue further claims.

Keywords: Liquidated ascertain damages, settlement agreement, homebuyers, housing development.

INTRODUCTION

Sale and purchase of a residential property from the primary market is regulated by the Housing Development (Control and Licensing) Act 1966 ('HDA') and its regulations. The twin objectives of the HDA are to regulate the business of housing industry and to protect the interests of purchasers and matters connected therewith. In deciding any disputes between the developers and purchasers, the interest of the purchasers shall be the paramount consideration of the courts. In the recent case of *Ang Ming Lee & Ors v Menteri Kesejahteraan Bandar, Perumahan dan Kerajaan Tempatan & Anor and other Appeals* [2020] 1 CLJ 162 FC, the Federal court reiterates the spirit of HDA in the following words:

"[40] The Act being a social legislation designed to protect the house buyer, the interest of the purchasers shall be the paramount consideration against the developer. Parliament has entrusted the Minister to safeguard the interests of the purchasers, and the Minister has prescribed the terms and conditions of the contract of sale as per Schedule H".

In *PJD Regency Sdn. Bhd v Tribunal Tuntutan Pembeli Rumah & Anor and Other Appeals* [2021]2 CLJ 441, the Federal court explain the meaning of a social legislation:

“A social legislation is a legal term for a specific set of laws passed by the Legislature for the purpose of regulating the relationship between a weaker class of persons and a stronger class of persons. Given that one side always has the upper hand against the other due to the inequality of bargaining power, the State is compelled to intervene to balance the scales of justice by providing certain statutory safeguards for that weaker class. When it comes to interpreting social legislation, the State having statutorily intervened, the courts must give effect to the intention of Parliament and not the intention of parties. Otherwise, the attempt by the Legislature to level the playing field by mitigating the inequality of bargaining power would be rendered nugatory and illusory”.

In safeguarding the interests of the house buyers, the sale and purchase agreement between the developers and house buyers is regulated by the statute in the prescribed form (Schedule G, H, I & J) depending on the type of property and nature of the development. The parties are not allowed to deviate, add or vary the statutory contract. In *Encony Development Sdn. Bhd. v Robert Geoffrey Gooch & Anor* [2016] 1 CLJ 893, the Court of Appeal emphasised the status of the statutory contract between the developer and purchaser. The Court said:

“[41] The SPA between the respondent and the appellant, who is a housing developer, is governed by a statutory form of contract as prescribed in sch H of the Housing Development (Control and Licensing) Regulations 1989[PU(A) 58/1989] (“the regulations”). As such, the provisions in the SPA are not merely contractual, but are in effect statutory provisions, as they are actually provisions of sch. H of the Regulations, which have been imposed bylaw upon the parties.”

The statutory contract outlines the duties and obligations of the developer and purchaser in the sale and purchase of the property. In terms of damages, Md Dahlan was of the view that the purchaser is not only entitled to the damages prescribed in the statutory contract but include exemplary, punitive, aggravated and non-pecuniary/pecuniary damages (Md Dahlan, 2023).

Despite stringent laws and regulations, complaints on housing related problems have been one of main consumer’s complaints in Malaysia (Amin *et al*, 2014). One of the main complaints is related to the late delivery of vacant possession of the houses. The statutory contract requires the developer to deliver the vacant possession of a landed property within 24 months from the date of the sale and purchase agreement whereas for strata property such as flat, apartments and condominium, the vacant possession must be delivered within 36 months. If a project is delayed, house buyers have the right to claim for liquidated ascertained damages (“LAD”) which is a contractually ascertained or pre-determined amount of damages that are claimable by either party in the event of a breach of contract. Clause 24(2) of Schedule G and clause 25(2) of Schedule H of the Housing Development (Control and Licensing) Regulation 1989 (‘HDR’) states that the LAD is calculated at the daily rate of 10% per annum of the property purchase price.

House buyers may lodge claim at the Homebuyer's tribunal if the LAD amount does not exceed RM50,000. A court claim must be made if the LAD amount exceeds RM50,000.

However, claiming LAD is more complicate than it supposed to be as developers frequently refuse to pay the LAD for various reason (Amin et al, 2014). In several cases, developers proposed to reach an out-of-court settlement with the house buyers for a lower sum. The settlement agreement is an attractive option to certain house buyers who want to avoid the trouble of taking their claim to court or to the tribunal. It is important to note that when the parties enter into settlement agreement, they generally agree to resolve their disputes without further litigation. The first issue is what if the house buyer changes his mind and decided to forego the settlement agreement and continue with the court proceedings against the developer? The second issue is whether the settlement agreement is valid in respect of statutory contract pursuant to HDA?

Through doctrinal legal research approach, this study analyses the validity and effect of settlement agreement on the rights of house buyers in claiming liquidated ascertained damages. Findings from the analysis will be able to highlight the importance of understanding the implications of a settlement agreement before signing it because it can significantly limit house buyers' ability to pursue further claims.

LIQUIDATED ASCERTAINED DAMAGES

Timely completion of a housing project is critical for house buyers and Developer. House buyers may have emotional, social, and financial difficulties because of late delivery of their houses. In most cases, the buyers have to make two payments: one for the "in progress" home and another for the rented home. (Amin et al, 2014). As for developers, they are required to pay damages to the house buyers if they fail to complete house the within the statutory timeline provided under the HDA. In *Brisdale Resources Sdn. Bhd v Law Kim* [2004] 6 MLJ 76 it was held that the agreed liquidated damages for late delivery of vacant possession as contained in clause 22 of the sale and purchase agreement was a mandatory provision.

Several issues surrounded the application of LAD has been addressed in a landmark decision by the Federal Court in *PJD Regency Sdn. Bhd v Tribunal Tuntutan Pembeli Rumah & Anor and other Appeals* [2021] 2 CLJ 441. In summary, *PJD Regency's* case underlined the following principles:

- i) The commencement date for the calculation of LAD should begin from the date of payment of booking fee/deposit/ initial fee and not from the date of the sale of purchase agreement as previously understood. In coming to this conclusion, the Court revert to the underline objective of the HDA as a social legislation to uphold the interests of the purchasers as the weaker party. The Developers should not be allowed to take advantage of their unspoken commercial practice *i.e* by collecting booking fee from the purchaser as upfront payment prior to the execution of the sale and purchase agreement. In doing so, the Developers has contravened regulation 11

- (2) of the HDR 1989 which prohibit the collection of any payment prior to the execution of the sale and purchase agreement.
- ii) the cut-off date for the calculation of LAD should be the date of Certificate of Completion and Compliance (CCC) and not the date of Certificate of Practical Completion (CPC).
 - iii) The LAD should be calculated on the purchase price stated in the sale and purchase agreement and not the rebated purchase price. This is to prevent the developers from manipulating the purchase price for the collateral purpose of having LAD.

The Federal Court decision in this case send a strong message to the developers to stop manipulating the purchasers through their so-called 'standard practices' and to follow the laws as laid down in the HDA and HDR.

SETTLEMENT AGREEMENT

A settlement agreement is a binding contract between the parties involved, intended to resolve a dispute without the need for further litigation. Once the agreement is accepted, the parties generally cannot retract their commitments or act as though the agreement never existed. This is largely because settlement agreements often include clauses that release one or both parties from any future claims related to the dispute. Additionally, such agreements are usually regarded as final and binding, meaning that the parties cannot later reopen the case to seek additional damages. The agreement also commonly specifies the compensation or damages that one party is entitled to receive, effectively limiting any future claims for additional damages.

The settlement agreement is valid under section 64 of the Contract Act 1950 which deals with the dispensation of a promise made to a promisee. Section 64 of the Contract Act reads "Every promise may dispense with or remit, wholly or in part, the performance of the promise made to him, or may extend the time of such performance, or may accept instead of it any satisfaction which he thinks fit".

The question on the validity of the settlement agreement in respect of statutory contract pursuant to HDA has been discussed in many cases. In *Oxbridge Height Sdn. Bhd v Abdul Razak Mohd Yusof [2014] MLJU 1932*, the court of appeal held that the settlement agreement entered between the developer and the purchasers was valid. The court observed that there should not be nothing illegal in law for a settlement agreement to be negotiated with the full participation and direction from JPN with a view to save a failing housing project from being an abandoned project. It will be in the public interest and in the interest of house buyers, if the law allowed a regulated settlement agreement and waiver of LAD on terms as specified in the settlement agreement.

The validity of settlement agreement was reaffirmed in the case of *Pinpoint Consortium (M) Sdn. Bhd v Mammoth Empire Land Sdn. Bhd [2020] 5 CLJ 281*. In this case, the plaintiff purchased a parcel in an apartment from the defendant. Following a

delay by the defendant in delivering vacant possession of the parcel, the plaintiff filed a claim against the defendant at session court for liquidated damages for a sum of RM261,339.63. The court struck out the suit by the plaintiff on the ground the parties has entered into a settlement agreement regarding the claimed sum. The plaintiff appealed against the decision to the High court. The appeal was dismissed by the High Court on the ground that the settlement agreement constituted a full and final settlement of any dispute between the parties regarding the liquidated ascertained damages. The first reason cited by the court is because both parties have the freedom of contract, and such freedom could only be restricted by clear words of written law. The second reason is that settlement agreement is valid under section 64 of the Contract Act 1950 which deals with the dispensation of a promise made to a promisee. It was further observed that there is no provision in the HDA and HDR which invalidates a settlement agreement concluded under section 64 of the Contract Act. The court recognised that thorough amicable settlement, disputes pertaining to sale and purchase agreement may expeditiously and economically dispose which is in the public interest. Another important observation by the court in this case is that the settlement agreement is a new agreement and does not constitute an attempt to contract out of the HDA and HDR.

The court upheld the decision of *PinPoint Consortium in Chin Kok Woo & Ors v Sky Park Properties Sdn. Bhd & Ors* [2022] 10 MLJ 153. In this case the court held that although HDA was a piece of social legislation and was intended to protect purchasers, this did not mean that the court should disregard any settlement agreement that the plaintiffs had entered with the defendants on the matter of liquidated ascertained damages.

However, the court took a different stand on the position of settlement agreement in *Hedgeford Sdn. Bhd v Sri Ganannatha a/l Sivanathan & Ors* [2018] 1 LNS 1497. In this case the court emphasised that in determining the validity of the settlement agreement what really matters are not so much the label or the description in the settlement document but rather the substance and content. The utmost important is the state of mind of the party who signs the agreement. In dealing with a statutory contract, it is vital to establish that there is an exceptionally compelling and convincing evidence to demonstrate, on a balance of probabilities that the purchasers had intentionally agreed to forego their statutory entitlement to be paid LAD in full.

Similar view adopted by the court in *Leong Keng Chiang v Prema Bonanza Sdn. Bhd* [2021] 1 LNS 659. In this case the plaintiff purchased a condominium unit from the defendant and signed a sale and purchase agreement Schedule H of the Housing Development (Control and Licensing) Regulations 1989. The defendant had obtained extension of time for the completion period to be extended to 54 months instead of the usual 36 months' timeline. Relying on *Ang Ming Lee* case, the plaintiff prayed for a declaration that any extension of time granted to the defendant pursuant to regulation 11(3) of the HDR is null and void. Thus, the defendant is obliged to pay the liquidated

ascertained damages for the period exceeding 36 months. The defendant argued that the plaintiff has knowledge and consented to the SPA. Furthermore, by accepting the settlement sums, the plaintiff is estopped from claiming the liquidated ascertained damages. The court in this case took a stand that there is no estoppel against statute. Any purported settlement, which has the effect of depriving homebuyers from their statutory rights has no legal effect. The court reiterated the objective of HDA as a social legislation to protect house buyers. If waiver or estoppel is allowed to operate, it will defeat the object and purpose of HDA and the HDR.

The principle of estoppel is provided in section 115 of the Evidence Act 1950 [Act 56] which states as follows: “When one person has by his declaration, act or omission intentionally caused or permitted another person to believe a thing to be true and to act upon such belief, otherwise than but for that belief he would have acted, neither he nor his representative in interest shall be allowed in any suit or proceeding between himself and that person or his representative in interest to deny the truth of that thing.

In analysing the above cases, it can be concluded that court is very cautious in matters affecting the interests of house buyers. This is in line with the main objective of housing legislation ‘to protect the weak against the strong’. In *Hedgeford Sdn. Bhd.*, the court is taking a careful approach in determining whether the purchaser has intended to forego their statutory rights. While in *Leong Keng Chiang’s* case, the court refuse to allow any waiver or estoppel to be used against the rights of house buyers which are statutorily protected under a specific legislation enacted for that purpose. If the rights are allowed to be contracted out, the intended objective of the law would be defeated. As highlighted in many cases, HDA is intended to regulate the relationship between the developer and house buyers. Due to the inequality of bargaining power between the developer and house buyers, the statutory safeguards of the weaker party should be the utmost consideration by the court.

While recognising the objective of HDA, in several instances the court was of the view that it should not disregard any settlement agreement that the plaintiffs had entered with the defendants. This is in line with the principle of freedom of contract as highlighted in the case of *PinPoint Consortium*. Furthermore, there is no express provision in the statute either HDA or HDR which prevent parties from resorting to amicable settlement pertaining to their disputes. Once, amicable settlement has been agreed, parties are expected to honour their promise. This will bring finality to the dispute, save cost and avoid elements of unjust enrichment by one party towards another.

Nevertheless, the court will not compromise any settlement agreement which may jeopardise the interests of the house buyers. Thus, failure to properly explained the contents of the settlement agreement and its consequences, may affect its validity. In *Mohd Rizal Atan & Ors v Perbadanan Perumahan Rakyat 1 Malaysia@Perbadanan Prima Malaysia* [2023] 1 LNS 133, the defendant in acknowledging the delay and its obligation to pay the LAD, arranges a scheme of settlement with the purchaser of the said

properties including the plaintiffs. Based on the scheme, the defendant has paid certain sums of LAD in accordance with their respective grouping and were accepted by the plaintiffs. Despite the settlement agreement, the plaintiffs file a claim for LAD as stipulated under the SPA. The Plaintiff argued that they were not informed or consulted regarding the contents of the acceptance letter including the calculation of the LAD. Since the Plaintiffs had succeeded in proving that they have a reasonable cause of action, the court refused to strike out the claim and the case fit to be decided by court by way of a full trial. Similarly, in *Dickson Woo Boon Siew and others v Cosmopolitan Avenue Sdn Bhd* [2024] CLJU 1477 it was held that the settlement agreement is invalid and void if it was acquired through fraudulent misrepresentation.

CONCLUSION

A settlement agreement is an effective tool for resolving liquidated ascertained damages claims between house buyers and developers in a friendly and efficient manner, avoiding the need for prolonged litigation. Being a 'non-litigious society', many house buyers in Malaysia just wanted to quickly collect the keys to their houses and settle the claims out of court. However, the imbalance of power between house buyers and developers can impact the fairness of such settlements. The judicial stand on the validity of settlement in respect of statutory contract is indefinite. While the court in some cases upheld the freedom of contract between the parties and the importance of finality in settling any dispute, the court is also concerned about the interest of house buyers who are continuously exposed to abuse and manipulation. In addressing this issue, it is pertinent for the house buyers who opt for the settlement agreement to seek legal advice on the effects of the settlement agreement as some of the clauses may have a far-reaching consequence. Moreover, this would also mean they will forego the statutory rights granted under the law. The developers, on their part, have a statutory duty to pay the liquidated ascertained damages. Any agreement must be free from misrepresentation or coercion. As seen in previous cases, courts are quick to invalidate any settlement agreement that is unclear or deceptive.

REFERENCES

- Amin, N, Sufian, A, Syed Abdul Kader, S.Z, Kasim, S. (2014) Claiming damages for Late Delivery of Vacant Possession of Private House in Malaysia: Legal Issues and Challenges. *International Review of Management and Business Research*. Vol 3 Issue 2, p 907-914
- Cheah, A. (2021). Malaysia-Federal Court: Calculation of Liquidated Agreed Damages Begins from the Date of Booking Fee. [Insights on Malaysia's laws and regulations with Conventus Law.](#)
- Chon, W.T.S. (2021). Beware Housing Developer: The Calculation of the Liquidated Ascertained Damages for Late Delivery of Vacant Possession. 1 *LNS (A)*, li.
- Md. Dahlan, N.H. (2023). Claim for Damages by Aggrieved Victim of Purchasers in Abandoned Housing Project in Peninsular Malaysia. *Land, Property, & Good Governance*, PT RajaGrafindo Persada, Depok, Indonesia
- Mohamad, N.N & Hassan, R [2020]. Understanding Abandoned Housing Projects in Malaysia and The Protection for Home Buyers, *International Journal of Islamic Economics and Finance Research*. Vol 3, No 2, 77-90
- Saufi, A. (2024). Liquidated Ascertained Damages for late Delivery. [Liquidated Ascertained Damages for Late Delivery of Property \(ascolaw.co\)](#)
- S.Y Kok (2017). *Housing Development Law*. Sweet& Maxwell, Malaysia.
- Housing Development (Control and Licensing) Act 1966 {Act 118}

CASES

- Ang Ming Lee & Ors v Menteri Kesejahteraan Bandar, Perumahan dan Kerajaan Tempatan & Anor and other Appeals* [2020] 1 CLJ 162 FC
- Brisdale Resources Sdn. Bhd v Law Kim* [2004] 6 MLJ
- Chin Kok Woo & Ors v Sky Park Properties Sdn. Bhd & Ors* [2022] 10 MLJ 153
- Dickson Woo Boon Siew and others v Cosmopolitan Avenue Sdn Bhd* [2024] CLJU 1477
- Encony Development Sdn. Bhd. v Robert Geoffrey Gooch & Anor* [2016] 1 CLJ 893

Hedgeford Sdn. Bhd v Sri Ganannatha all Sivanathan & Ors [2018] 1 LNS 1497

Leong Keng Chiang v Prema Bonanza Sdn. Bhd [2021] 1 LNS 659

*Mohd Rizal Atan & Ors v Perbadanan Perumahan Rakyat 1 Malaysia@Perbadanan Prima
Malaysia [2023]1 LNS 133*

Oxbridge Height Sdn. Bhd v Abdul Razak Mohd Yusof [2014] MLJU 1932

*PJD Regency Sdn. Bhd v Tribunal Tuntutan Pembeli Rumah & Anor and other Appeals [2021]
2 CLJ*

Pinpoint Consortium (M) Sdn. Bhd v Mammoth Empire Land Sdn. Bhd [2020] 5 CLJ 281

A CONCEPTUAL STUDY ON THE INTENTION TO USE FINANCIAL ROBO-ADVISORS FOR ISLAMIC FINANCIAL PRODUCTS: EMPOWERING MADANI ECONOMY

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Abstract

One of the biggest breakthroughs in Malaysia's financial ecosystem is the introduction of financial robo-advisors (FRAs), an artificial intelligence or AI-powered tools that automate investor portfolio management. FRAs, despite being new in Malaysia, are rapidly advancing with untapped research potential. In addition, FRAs are gaining popularity among the financial consumers in a tech-driven world. Unfortunately, there is a lack of research focusing on retail investors on FRAs. Malaysia, the global Islamic finance hub, employs FRAs for Islamic financial product advisory services, but research on their use in educating retail advisors is limited. This paper proposes a simple yet comprehensive conceptual model that expands the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) to identify the main determinants influencing the intention to use FRAs for Islamic financial products among retail investors in Malaysia.

Keywords: *Financial Robo-Advisors, Islamic financial products, TAM, UTAUT*

INTRODUCTION

Financial technology (Fintech), an innovation that combines technology and finance, has changed how conventional payments, banking transactions, and investing systems operate. It focused on improving the service quality of financial services using information technology (IT). One of the significant breakthroughs is the rise of financial robo-advisors (FRAs). FRAs refer to digital platforms that provide automated web-based portfolio management services with no or minimal human intervention (Ponnaiya & Ryan, 2017).

FRAs offer lower and more transparent cost structures, making them less susceptible to potential conflicts of interest compared to human financial advisors (FAs) who may be misguided (Fisch et al., 2019). The concept of FRAs has gained significant attention from the financial industry, hence, the world's first robo-advisors, Betterment was launched in 2008 (Reddavid, 2018). Since 2008, the robo-advisors industry has flourished, with its asset grew from US\$0.19 trillion to US\$2.42 trillion from 2017 to 2022.

FRAs are beneficial to investors because they provide more objective-driven and less emotionally influenced than human financial advisors, thus, their investment performances are unbiased and successfully achieved (Thi et al., 2023). The FRAs will automatically create an appropriate asset allocation strategy based on personal investment preferences such as the initial capital and time horizon (D'Acunto & Rossi, 2021).

In Malaysia, the development of the robo-advisor industry is still in its infancy and is relatively slower than the neighboring countries, such as Singapore and Hong Kong. In 2017, the Securities Commission Malaysia (SC) announced the Digital Investment Management Framework and consequently, currently there are seven licensed FRAs platforms that operate in Malaysia (Lim, 2020). Among them are:

- i. StashAway: an online investment management company, headquartered in Singapore
- ii. myTHEO: a joint venture between Japanese and Malaysian fintech companies
- iii. Wahed Investment: Malaysian fintech company that provide Halal investment platform
- iv. Best Invest: a shariah-compliant unit trust funds
- v. Raiz Invest: a Malaysian company that provide services to invest in Amanah Saham Nasional funds

Among the above platforms, StashAway has represented the largest market share by recording over US\$1 billion (RM4.05 billion) in assets under management (AUM) in January 2021 (Tan, 2021). myTHEO on the other hand recorded US\$ 6501 million and Wahed Investment recorded US\$39 million

Although the FRAs has continually gained market presence among investors globally, the research on FRAs in Malaysia is still scarce. There is also an issue of lacking awareness and understanding among Malaysian investors regarding FRAs, although there are seven platforms available since 2017. This paper aims to propose a simple yet comprehensive conceptual model toward providing an insight into factors influencing the use of FRAs for Islamic financial products in Malaysia. The study will extend the Theory of Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) as the baseline theories to explain the intention to use FRAs among Malaysians investors.

Understanding investors acceptance for FRAs for Islamic financial products are important because the use of FRAs in Malaysia can significantly strengthen the Madani economy by promoting financial inclusivity, enhancing financial literacy, supporting sustainable investment practices, reducing barriers to investment, and driving innovation in the financial sector. By aligning these core principles, FRAs can contribute to building a more inclusive, equitable, and sustainable economic environment in Malaysia.

The structure of the paper is as follows. Section 2 explains some relevant literature reviews; Section 3 proposed a conceptual model on the intention to use FRAs

for Islamic financial products. Then, Section 4 briefly explains the research methodology adopted and Section 5 provides the conclusion.

LITERATURE REVIEW

Underpinning Theories

The TAM and the UTAUT will serve as the foundational theories for this study. The TAM developed by Davis (1985) is a popular and influential theory that concentrates on user perception and interaction with technology, focusing on perceived usefulness and perceived ease of use. The TAM has established itself as a dependable, powerful, and cost-effective model for predicting user acceptance of technology (Davis, 1989; Davis et al., 1989) in various contexts and technologies. The UTAUT was developed by Venkatesh et al. (2003). Within the framework of the UTAUT model are the four most significant predictors: performance expectancy, effort expectancy, social influence, and facilitating conditions. It is the contention of both the TAM and UTAUT that intention is influenced by their independently suggested variables. The UTAUT model is believed to be more robust than other technology acceptance models in evaluating and predicting technology acceptance (Venkatesh et al., 2003).

Nevertheless, despite the TAM and UTAUT frameworks' broad acceptance and extensive testing and validation, research results are contradictory (Gan et al., 2021) due to differences in research factors, measurement instruments, sample, and analysis, leading to inconsistent results. Therefore, further research is needed using the TAM and UTAUT as a theoretical basis for the study of technology acceptance such as FRAs. In addition, previous studies have suggested adding several additional variables to the TAM and UTAUT models to broaden their scope and strengthen their robustness as well as increase the model's explained variance (Chu et al., 2022). Past studies have shown that other variables affect behavioral intention within the original frameworks. This current study will extend the TAM and UTAUT models by incorporating two additional variables, namely perceived risk and trust in FRAs, in examining the adoption of FRAs, which hinges upon recent studies underscoring the importance of these variables in adopting FRAs among retail investors in Malaysia.

Islamic Finance

The Malaysian Islamic finance system is maturing and has the potential to transform the economy and society, with Islamic fintech emerging as a new trend in the financial and banking industry (Dawood et al., 2022). The growth of Islamic fintech is experiencing a significant upward trajectory in the era of digitalization and AI. The integration of AI in Islamic finance is enhancing Shariah compliance advice through FRAs, thus democratizing financial services. Since research on the use of FRAs by retail investors is still in its infancy and has not been extensively documented (Abdullah et al., 2022; Dawood et al., 2022), this study is proposed to close these gaps.

Financial Robo-Advisors (FRAs)

FRAs are powered by AI algorithms that provide automated portfolio management services (Jung et al., 2018). It offers zero to minimal human intervention during the advisory process. During the advisory process, a set of standardized online questionnaires to capture investor's risk profiles, which contrasts to the traditional human advisors who identify the risk profiles of consumers through human-to-human conversations (Ruhr et al., 2019).

FRAs provide benefits both to the service providers and also the consumers (Ponnaiya & Ryan, 2017). Through FRAs service providers are able to cut costs and thus, charge a lower management fee to the consumers of around 0.2% to 1% per annum. As a result, FRAs are more affordable than the more expensive traditional human advisors. Service providers could employ FRAs to deal with relatively less sophisticated investors with disintermediation and enhanced efficiency. In addition to that, FRAs offers highly accessible services through mobile application, over the web, anytime, anywhere (Li et al., 2021).

Digital technologies, including information, computing, communication, and connectivity, have the potential to significantly transform products, services, business processes, relationships, and strategies (Hess et al. 2016), particularly in the financial services industry. FRAs are a type of fintech that has emerged in response to technological advancements. FRAs are advanced fintech systems that utilize AI to provide interactive and user-friendly interfaces (Belanche et al., 2019). FRAs have advanced through technological phases with the current iteration of self-learning AI (Deloitte, 2016). In addition to offering personalized portfolio assignments based on an investor's goals and risk tolerance, FRAs also lead investors through an automated process of financial advice and continually rebalance their portfolio.

Intention to Use FRAs

Intention is a crucial aspect of human behavior, as it determines how individuals act and use goods or services. The intention is derived from Fishbein and Ajzen's (1975) concept of behavior intention, which refers to the desire to perform a specific behavior rather than doing it. It is the extent to which a person consciously intends to perform or refrain from performing a particular behavior in the future (Warshaw & Davis, 1985). In this study, intention is defined as the user's willingness to use or not use FRAs in the future. Indicators used to measure intention to use FRAs among Malaysia's retail investors include future usage, regular usage, and an increase in frequency of usage.

TAM Variables

Attitude refers to a person's evaluation of a behavior, either favorably or unfavorably (Ajzen, 1991). Davis (1989, p. 320) defined perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her performance" and perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort". As per the TAM model, users'

behavioral intentions are greatly influenced by their attitudes, which are subsequently influenced by perceived usefulness and perceived ease of use. In line with the TAM formulation, the suggested connections between the TAM's components are adapted to the context of the adoption of FRAs in order to explain the behavioral intentions of retail investors in Malaysia.

UTAUT Variables

The UTAUT model identifies key constructs that directly influence users' behavioral intentions, including performance expectancy, effort expectancy, social influence, and facilitating conditions. Venkatesh et al. (2003), the creators of the UTAUT model, provide comprehensive definitions for all its components. Performance expectancy is defined as "the degree to which an individual believes that using the system will help him or her to attain gains in job performance". Effort expectancy is defined as "the degree of ease associated with the use of the system". Social Influence is defined as "the degree to which an individual perceives that important others believe he or she should use the new system".

Facilitating conditions are defined as "the degree to which an individual believes that an organizations and technical infrastructure exists to support the use of the system". The study adapts UTAUT formulations to Malaysian young retail investors' behavioral intention with FRAs, ensuring their relationships are tailored to the adoption context.

Perceived Risk

The integration of new technology in financial services often raises users' risk awareness due to the potential for monetary losses. Perceived risk is defined as the degree of uncertainty and potential loss arising from using technologies (Hong et al., 2023). Nonetheless, different researchers define the context of uncertainty differently (To & Trinh, 2021). The study examines the privacy, security, and financial risks associated with using FRA services, as suggested by Nguyen et al. (2022). Perceived risk negatively influences intention to use FRAs as demonstrated by Wu and Gao (2021).

Trust

According to Mayer et al. (1995), "trust is a willingness to be vulnerable and abandon right of control based on the expectation of the trustor". Trust in AI can be established by open communication and disclosure, and perceived usability can be improved by an intuitive user interface and unambiguous instructions (Yi et al., 2023). Therefore, it is believed that trust plays a crucial role in influencing Malaysian retail investors' intention to use FRAs.

PROPOSED CONCEPTUAL FRAMEWORK

Based on the review of relevant literature, the proposed model for this study is presented in Figure 1.

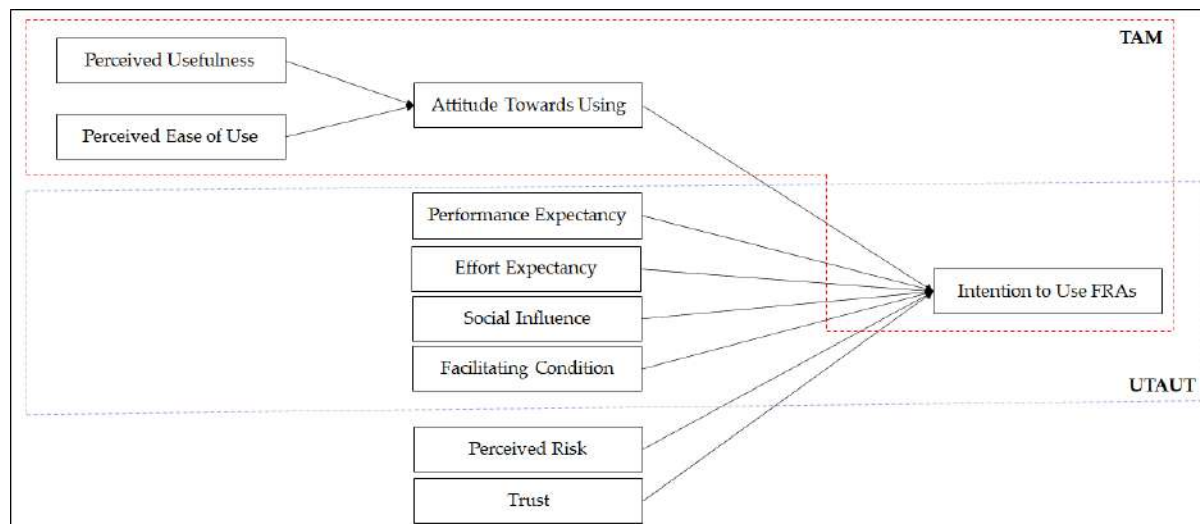


Figure 1. Proposed Conceptual Framework

The study proposes a quantitative research approach using an online survey to gather data from Malaysian retail investors. The PLS-SEM will be used to test the hypotheses. As this is an exploratory study and the hypothesized relationships between variables have not yet been evaluated, PLS-SEM is considered appropriate (Hair et al., 2021).

CONCLUSION

The study proposes a conceptual model identifying factors influencing the intention to use FRAs for Islamic financial products among Malaysian retail investors, expanding the TAM and UTAUT models and adding perceived risk and trust. Further empirical study is therefore needed to examine whether all of these factors contribute significantly to FRAs usage. The study expects significant relationships between the proposed critical factors and the intention to use FRAs among Malaysian retail investors.

This proposed study aims to enhance the understanding of FRAs in Malaysia by expanding the TAM and UTAUT models. It also seeks to provide insights for the government and banking industry on promoting FRAs among retail investors in Malaysia. The proposed study also explores the role of FRAs in helping Malaysians choose Islamic financial products and strengthening the Madani Economy by offering accessible, personalized, and cost-effective financial advisory services.

Limitation of the present study is that we have confined ourselves to published articles, both academic and practitioner, which are available to us from the four chosen databases. There may be articles not brought to our attention, hence, interpretation of

the proposed model in this study on intention to use FRAs in Islamic financial products may be somewhat limited.

REFERENCES

- Abdullah, O., Shaharuddin, A., Wahid, M. A., & Harun, M. S. (2022). Artificial intelligence (AI) application in Islamic finance: A review of business use cases. <https://oarep.usim.edu.my/jspui/bitstream/123456789/19535/1/Artificial%20Intelligence%20%28Ai%29%20Application%20In%20Islamic%20Finance%20A%20Review%20Of%20Business%20Use%20Cases.pdf>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Belanche, D., Casaló, L. V., & Flavián, C. (2019). Artificial Intelligence in FinTech: understanding robo-advisors adoption among customers. *Industrial Management & Data Systems*, 119(7), 1411-1430. <https://doi.org/10.1108/IMDS-08-2018-0368>
- Chu, T. H., Chao, C. M., Liu, H. H., & Chen, D. F. (2022). Developing an extended theory of UTAUT 2 model to explore factors influencing Taiwanese consumer adoption of intelligent elevators. *SAGE Open*, 12(4), 21582440221142209. <https://doi.org/10.1177/21582440221142209>
- Davis, F. D. (1985). A technology acceptance model for empirically testing new end-user information systems: Theory and results (Doctoral dissertation, Massachusetts Institute of Technology).
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319-340.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003.
- Dawood, H., Al Zadjali, F., Al Rawahi, M., Karim, S., & Hazik, M. (2022). Business trends & challenges in Islamic FinTech: A systematic literature review. *F1000Research*, 11.
- Deloitte. (2016). The expansion of Robo-Advisory in Wealth Management. *Deloitte*, 5. <https://www2.deloitte.com/content/dam/Deloitte/de/Documents/financial-services/Deloitte-Robo-safe.pdf>
- D'Acunto, F., & Rossi, A. (2021). New frontiers of robo-advising: Consumption, saving, debt management, and Taxes. Working paper, Boston College (USA) and Georgetown University (USA). SSRN. <https://ssrn.com/abstract=3778244>
- Fisch, J. E., Laboure, M., & Turner, J. A. (2019). The emergence of the Robo-advisor. *The Disruptive Impact of FinTech on Retirement Systems*, 13, 13-37.

- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Addison-Wesley, Reading, MA.
- Gan, L. Y., Khan, M. T. I., & Liew, T. W. (2021). Understanding consumer's adoption of financial robo-advisors at the outbreak of the COVID-19 crisis in Malaysia. *Financial Planning Review*, 4(3), e1127. <https://doi.org/10.1002/cfp2.1127>
- Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.
- Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2016). Options for formulating a digital transformation strategy. *MIS Quarterly Executive*, 15(2).
- Hong, X., Pan, L., Gong, Y., & Chen, Q. (2023). Robo-advisors and investment intention: A perspective of value-based adoption. *Information & Management*, 60(6), 103832. <https://doi.org/10.1016/j.im.2023.103832>
- Jung, D., Dorner, V., Weinhardt, C., & Puzmaz, H. (2018). Designing a robo-advisor for risk-averse, low-budget consumers. *Electronic Markets*, 28(3), 367–380. <https://doi.org/10.1007/s12525-017-0279-9>
- Lim, J.L. (2020). Which robo advisor should you use in Malaysia? <https://www.imoney.my/articles/robo-advisor-comparison>.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of management review*, 20(3), 709-734. <https://doi.org/10.5465/amr.1995.9508080335>
- Nguyen, T. P. L., Chew, L. W., Muthaiyah, S., Teh, B. H., & Ong, T. S. (2023). Factors influencing acceptance of Robo-Advisors for wealth management in Malaysia. *Cogent Engineering*, 10(1), 2188992. <https://doi.org/10.1080/23311916.2023.2188992>
- Ponnaiya, S., & Ryan, K. (2017). Robo-advisors: The rise of automated financial advice. Ipsos.
- Reddavid, L. (2018). The Evolution of Wealth Management: Transformation and Innovation of Robo Advisory (pp. 27–32). Bachelor's thesis, Università Ca'Foscari Venezia. <http://hdl.handle.net/10579/13076>
- Ruhr, A., Berger, B., & Hess, T. (2019). Can I control my robo-advisor? Trade-offs in automation and user control in (digital) investment management. Twenty-fifth Americas Conference on Information Systems, 2, 1–10. <https://aisel.aisnet.org/amcis2019/cognitiveinis/cognitiveinis/2/>
- Tan, Z. Y. (2021, January 25). StashAway achieves assets under management of over US\$1b. The Edge Markets.
- To, A. T., & Trinh, T. H. M. (2021). Understanding behavioral intention to use mobile wallets in Vietnam: Extending the TAM model with trust and enjoyment. *Cogent Business & Management*, 8(1), 1891661.

- Thi Phuong Lan Nguyen, Li Woon Chew, Saravanan Muthaiyah, Boon Heng Teh & Tze San Ong (2023) Factors influencing acceptance of Robo Advisors for wealth management in Malaysia, *Cogent Engineering*, 10:1, 2188992, DOI: 10.1080/23311916.2023.218899
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Warshaw, P. R., & Davis, F. D. (1985). Disentangling behavioral intention and behavioral expectation. *Journal of Experimental Social Psychology*, 21(3), 213-228.
- Wu, M., & Gao, Q. (2021, July). Understanding the acceptance of robo-advisors: Towards a hierarchical model integrated product features and user perceptions. In *International Conference on Human-Computer Interaction* (pp. 262-277). Cham: Springer International Publishing.

BURSA MALAYSIA STOCK LIQUIDITY

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Abstract

This paper analyzes the liquidity of Bursa Malaysia stocks using the popular price impact model, Amihud (2002) Illiquidity measure and Adjusted Illiquidity proposed by Kang and Zhang et al. (2014). Given the prevalence of zero-volume days in emerging economies, the analysis incorporates adjusted illiquidity as an additional measure of liquidity. This metric reduces biases associated with zero volume days, offering a more accurate evaluation of Amihud Illiquidity. The study examines 532 companies listed on the Main Market between 2015 and 2022. Using Amihud Illiquidity measure, the result shows an average of -0.0026, and using Adjusted Illiquidity, the average stock liquidity is -18.7064. The findings show Bursa Malaysia stocks are generally liquid. The statistics show some small market capitalisation stocks are more liquid than big capitalisation stocks. This finding indicates size only does not determine stock liquidity. This study also identifies the top and bottom stocks based on Amihud Illiquidity, with more negative values indicating higher liquidity. The findings provide valuable insights into Malaysian stocks' liquidity in emerging economies.

Keywords: Adjusted Illiquidity Amihud Illiquidity, Bursa Malaysia.

INTRODUCTION

Liquidity remains an essential market characteristic that ensures smooth market functioning. Liquidity refers to the capacity to hold securities that can be readily sold in the financial market without causing a substantial price change (Kyle, 1985). In another broader definition, liquidity can refer to the willingness of stock market participants to engage in trades (Stumpp & Scott, 1999). Naik and Reddy (2021) define liquidity as the market's ability to absorb a large number of securities at a low execution cost in a short period with minimal price impact. Amihud and Mendelson (1986) show that high liquidity indicates a robust market where large volumes can be traded seamlessly. Low liquidity suggests that even small trades can lead to substantial price volatility and higher transaction costs. The importance of liquidity is associated with market liquidity risk, which refers to the loss faced by market participants who want to execute a trade without achieving the maximum price. Investors place great importance on liquidity since it enables them to diversify their portfolios by effortlessly entering and exiting trading positions in financial markets. Investors may only benefit from this flexibility if the stock liquidity is high.

Tran et al. (2018) show that markets with a high level of liquidity are more likely to attract investors' attention. Investors are more inclined to engage in stock transactions due to their perception that they can readily enter and exit positions (Juhandi et al., 2019) since selling an illiquid stock can be challenging or even

impossible without accepting a lower price (Bogdan et al., 2012). Abudy (2020) shows a significant positive relationship between investors' trading and stock market liquidity. Ma et al. (2019) findings suggest that increased trading volume significantly improves stock market liquidity. Investors require higher return premiums for low liquidity stocks (Amihud & Mendelson, 1986; Chiang & Zheng, 2015, Marozva, 2019), however, for markets which are not fully integrated with the global economy, the findings are the opposite (Batten & Vo, 2014; French & Taborda, 2018). Dinh et al. (2023) find higher liquidity stocks tend to have a lower crash risk. Crash risk is regarded as the emergence of extremely negative values in the distribution of stock returns, after adjusting for the return portions that co-move with common factors (Habib et al., 2018). Liquid stocks typically indicate that investors are inclined to demand these stocks due to positive company performance, resulting in price stability. Reputable companies often have a strong presence in the market, leading to higher stock prices and increased liquidity.

The importance of stock market liquidity is highlighted in its role in ensuring market efficiency, influencing stock returns, and supporting overall economic stability, especially during periods of financial stress. A liquid equity market can bolster countries' productivity growth and accelerate long-term investment (Levine, 2003; Naes, Skjeltorp, & Ødegaard, 2011). Liquidity is essential to maintain the financial system's stability and resilience, particularly during market downturns (Sarr & Lybek, 2002). For example, during the 2008 global financial crisis, investors, facing heightened uncertainty and risk aversion, moved their investments from risky, less liquid assets to safer, more liquid assets (Brunnermeier, 2009; Allen et al, 2009; Adrian & Shin, 2010). Similarly, studies show that during the Covid-19 pandemic, as uncertainty heightened, stock liquidity declined (Chebbi et al., 2021; Suardi et al., 2022). Studies emphasize the crucial impact of liquidity on investment decisions, corporate governance, and the broader economy, making it a vital parameter in both academic research and practical financial analysis (Naik & Reddy, 2020). For investors and policymakers, understanding stock liquidity is crucial for assessing market conditions, optimizing trading strategies, and making informed regulatory decisions.

Liquidity is easily perceived but not easily measured in financial markets, what the literature calls "an elusive concept" despite the abundance of literature on liquidity measurements (Aitken & Comerton-Forde, 2003; see also Fong et al., 2017; Goyenko et al., 2009; Le & Gregoriou, 2020; Ma et al., 2016; Ramos & Righi, 2020). The complexity of measuring liquidity arises due to its multiple dimensions, which include price impact, trading volume, execution speed, and transaction costs. This complication arises since liquidity is not a fixed attribute; it fluctuates in response to numerous economic conditions, markets, and periods. Therefore, no single measure perfectly captures all dimensions of liquidity. Ma et al. (2016) find that different markets require different liquidity measures. Measures that work for developed markets may not be suitable for emerging or frontier markets. Most literature applies low-frequency measures as they are easy to compute and applicable to various markets including emerging markets, however, they may not capture the nuances of

intraday trading. Among the popular low-frequency liquidity proxies are Dollar Volume, Turnover, Amihud (2002) measure, Closing Percent Quoted Spread (Chung and Zhang, 2014), Corwin & Schultz (2012) spread estimator, Pastor and Stambaugh (2003), Roll (1984) spread estimator and Zeros (Lesmond et al., 1999).

Considering liquidity in asset pricing is important for investment decision-making, this paper presents an analysis of Bursa Malaysia's stock liquidity. In emerging markets such as Malaysia, stock liquidity dynamics can differ significantly from those in developed markets due to unique market structures, investor behaviors, and regulatory environments. Bursa Malaysia, being the primary stock exchange in Malaysia, provides a diverse landscape for examining these liquidity patterns across various sectors and market segments. With the number of listed firms nearly 1000, a market capitalisation of approximately RM1.74 trillion, and an average daily trading volume of 3 billion in 2022, Bursa Malaysia is one of the largest bourses in ASEAN. Bursa Malaysia offers conventional and Islamic equities and has attracted domestic and international investors looking for diversification. Existing studies often focus on advanced modelling and in-depth econometric analyses (Amer Al-Jaifi et al., 2017; Chia et al., 2020; Ghasemi & Ab Razak, 2016) overlooking the importance of a foundational descriptive assessment that can provide a broad overview of liquidity across sectors and segments. Such preliminary analysis is important to understand the basic liquidity characteristics of stocks listed on Bursa Malaysia.

Therefore, this paper aims to measure and analyse the liquidity of stock listed on the main market of Bursa Malaysia using price impact proxies by Amihud (2002) and AdjILLIQ by Kang and Zhang (2014). By focusing on these objectives, this paper will contribute to the body of knowledge on stock liquidity in emerging markets, particularly in the context of Bursa Malaysia, and provide a basis for future research that delves deeper into the determinants and implications of liquidity in the Malaysian stock market. The rest of the paper is organized as follows. The following section discusses the data and liquidity measures, followed by results and discussion. The final section concludes.

METHODOLOGY

The study examines 532 stocks listed on the main market of Bursa Malaysia. The selection of these stocks aims to provide a comprehensive representation of the Malaysian equities market. The study encompasses the monthly period from January 2015 to December 2022. Liquidity is measured using Amihud (2002) Illiquidity and Kang and Zhang (2014) Adjusted Illiquidity. All data are obtained from Datastream.

LIQUIDITY MEASURES

To measure Bursa Malaysia stock liquidity, the study uses two proxies for liquidity using the price impact of a trade. The first measure is Amihud (2002) Illiquidity. Amihud (2002) Illiquidity measure has been widely used in academic literature as the

best low-frequency price impact proxy. The price impact model is important for measuring liquidity because it directly links trading activity to price changes. This relationship is critical for understanding how easily a stock can be traded without causing significant price fluctuations, which is a fundamental aspect of liquidity. The price impact in Amihud (2002) refers to the average daily change per dollar of trading volume. Fong (2017) for example suggests that Amihud Illiquidity is the best measure for monthly and daily price impact. This measure is useful because it can be easily calculated using readily available daily stock data, making it applicable to most stock markets and enabling long-term studies of illiquidity effects. Amihud Illiquidity measure is used in many studies including (Chung et al., 2014; Ma et al., 2019; Cakici & Zaremba, 2021). The Amihud (2002) Illiquidity ratio for stock i in month t is estimated as follows:

$$\text{Amihud}_{i,t} = \frac{1}{N} \sum_{d=1}^{N_{i,t}} \frac{|r_{i,d,t}|}{\text{Vol}_{i,d,t}} \quad (1)$$

Where,

$N_{i,t}$: Number of Trading Days with Non-Zero Volume for stock i in month t

$|r_{i,d,t}|$: Absolute Value of Return in Dollar for Stock i on day d in month t

$\text{Vol}_{i,d,t}$: Trading Volume in Dollar of Stock i on day d in month t

$$\text{Return is calculated using: } \ln \left(\frac{\text{Stock Price}_{i,d,t}}{\text{Stock Price}_{i,d-1,t}} \right) \quad (2)$$

For the second measure, this study uses the modified version of Amihud (2002) by Kang and Zhang (2014) known as AdjILLIQ. Kang and Zhang (2014) argued that the existing Amihud Illiquidity needs to be adjusted to non-trading days as it is common for emerging markets. The effectiveness of the Amihud measure is weakened when there are lots of non-trading days in a particular stock. Unlike the developed markets, where most stocks are frequently traded, zero-volume days are a rare occurrence. In emerging markets, however the probability of observing zero-volume days is larger. Kang and Zhang (2014) demonstrate that the AdjILLIQ measure performs better than the original Amihud ratio and other existing low-frequency liquidity measures, especially in markets with low trading activity. The modified Amihud measure, AdjILLIQ, is calculated as follows:

$$\text{AdjILLIQ}_{i,t} = \left[\frac{1}{N} \sum_{d=1}^{N_{i,t}} \frac{|r_{i,d,t}|}{\text{Vol}_{i,d,t}} \right] \times (1 + \text{ZeroVol}_{i,t}) \quad (3)$$

Where,

$N_{i,t}$: Number of Trading Days with Non-Zero Volume for stock i in month t

$|r_{i,d,t}|$: Absolute Value of Return in Dollar for Stock i on day d in month t

$Vol_{i,d,t}$: Trading Volume in Dollar of Stock i on Day d in month t

$ZeroVol_{i,t}$: The percentage of zero-volume days stock i in month, t .

RESULTS AND DISCUSSION

Descriptive Statistics

Table 1. Summary 532 stocks in Malaysia

	Mean	St. Deviation	Minimum	Maximum
Amihud ILLIQ	-0.0026	0.0156	-0.0803	0.0341
Adj ILLIQ	-18.7064	10.4615	-59.4872	-8.5340
Price	2.1391	6.3106	0.02680	116.0934
Stock Return	0.0006	0.0014	-0.0007	0.0108
Volume Trading	2646.7988	5196.9192	4.3304	62593.1495
Market Capitalization	2445.1706	8934.8497	18.6555	94575.3296

Table 1 presents the summary statistics for stocks listed on Bursa Malaysia's main market in 2015-2022. Amihud ILLIQ measures illiquidity; as a result, a lower value indicates liquid stocks, and vice versa. Using Amihud ILLIQ and ADJ ILLIQ, the average stock liquidity is -0.0026 and -18.7064. The liquidity value reported in this study is slightly higher than that reported by Ma et al. (2019). Ma et al. (2019) recorded an Amihud ILLIQ of 0.0770 using data from January 1990 to April 2015. This indicates that, based on price impact, Bursa Malaysia stock liquidity has improved in recent years. The mean of Adjusted Illiquidity (ADJ ILLIQ), an enhanced version of the Amihud measure, indicates a high level of market liquidity. However, the substantial ranges from -59.4872 to -8.5340 reflect the varying values of liquidity across different stocks, highlighting some significant disparities.

The average price is RM2.1391 shows that the market primarily consists of low-priced stocks. The prices range from RM0.02680 to RM116.0934 spanning from smaller firms with lower stock prices to more established companies with higher valuations. The stock return shows a positive gain with an average of 0.6%, indicating stable yet consistent returns across the sample. The average volume trades RM2388.9456, with a maximum trading RM94575.3296. The market landscape is diverse, with some stocks seeing frequent trades and others seeing much less. Market capitalisation ranges between RM18.6555 million and RM94575.3296 million, indicating a broad spectrum of company sizes. This range includes small-, mid-, and large-cap companies, highlighting the varied segments of the market.

Table 2. Distribution of 532 stocks in lowest and highest market capitalisation

	Lowest Market Capitalisation (RM million)	Highest Market Capitalisation (RM million)
Mean	66.6075	3238.0250
Std. Dev.	24.0957	8359.1871
Min.	25.7820	112.0665
Max.	111.2195	49647.8977

Table 2 provides a comparative view of market capitalisation metrics for both the smallest and largest stocks in the data set. The mean for the lowest market capitalisation group is 66.6075 and the mean for the highest market capitalisation is significantly higher, at 3238.0250. This suggests that the largest companies have much higher average valuations compared to the smallest companies, highlighting the vast disparity in company sizes. The standard deviation for the lowest market capitalisation is 24.0957, indicating moderate variability among the smallest companies' market caps. The high standard deviation for the highest market capitalisation, at 8359.1871, reflects significant variation in the sizes of the largest firms.

Table 3 provides insight into the top 10 most liquid stocks in the Malaysian market using Amihud ILLIQ. This liquidity measure is crucial as it indicates the ease with which a stock can be traded without significantly affecting its market price. A more negative Amihud (ILLIQ) value denotes higher liquidity. The top three on the list are Ralco Corporation (-0.2008), Kimlun Corporation (-0.1053) and Y&G (-0.0959). Based on adjusted ILLIQ, Far East Holdings, with a substantial market capitalisation of MYR 1491.0067 billion, demonstrates significant liquidity at a mean of (-62.9842). The analysis highlights the diverse range of market capitalisations among the top 10 stocks, from Ralco Corporation (MYR 29.2425 million) to Far East Holding (MYR 1491.0067 million). Interestingly, the data reveals that liquidity is not exclusively tied to company size, indicating that size is not the primary factor determining stock liquidity. This analysis highlights that high liquidity can be observed in both small and large companies.

Table 3. Top 10 Stocks with Highest Liquidity from 2015-2022

No	Company	Amihud (ILLIQ)	Adjusted (AdjILLIQ)	Market Capitalisation
1	Ralco Corporation	-0.2008	-31.1335	29.2425
2	Kimlun Corporation	-0.1053	-21.0611	430.4151
3	Y&G	-0.0959	-24.8456	190.0975

4	Teo Guan Lee Corporation	-0.0953	-45.4743	58.3028
5	Riverview Rubber Ests.	-0.0809	-60.0797	220.0705
6	See Hup Consolidated	-0.07866	-38.5524	72.5657
7	Far East Holdings	-0.07832	-62.9842	1491.0067
8	Kenanga Investment Bank	-0.07034	-18.4187	536.9535
9	White Horse	-0.06186	-45.4581	311.9660
10	Zecon	-0.05761	-21.8833	64.4549

Table 4 identifies the 10 stocks with the lowest liquidity. The lowest liquid stocks are Pegasus Heights, Smis Corporation, and PjBumi at Amihud (ILLIQ) values of 0.05792, 0.03818, and 0.03780, respectively. Both Table 4 and 5 show that high (low) liquidity is present across both small and mid-size market capitalisations, showing that many factors affect liquidity, not only size.

Table 4. Lowest 10 stocks with Low Liquidity from 2015 until 2022

No	Company	Amihud (ILLIQ)	Adjusted (AdjILLIQ)	Market Capitalisation
1	Xidelang Holdings	0.02232	-13.5871	140.1617
2	Marine & General	0.02309	-12.7240	149.8546
3	Paragon Union	0.02457	-23.5450	48.4255
4	Turiya	0.02704	-21.6585	40.7436
5	China Ouhua Winery Hdg.	0.03281	-18.8779	35.7038
6	Mentiga Corporation	0.03455	-29.6485	41.6951
7	Ark Resources Holdings	0.03586	-29.1010	18.6555
8	Pjbumi	0.03780	-25.4369	19.3618
9	Smis Corporation	0.03818	-29.2045	25.9490
10	Pegasus Heights	0.05792	-6.7315	97.03503

Table 5. Amihud Illiquidity by Market Capitalization

Amihud Illiquidity		
	Small Capitalization	Big Capitalization
Mean	0.000718649	-0.00724
Std. Deviation	0.025978292	0.009211
Minimum	-0.200782752	-0.07832
Maximum	0.057924462	0.006675

Table 5 provides descriptive statistics for Amihud Illiquidity. For small capitalisation stocks, the average Amihud illiquidity is 0.000718649, indicating generally lower liquidity. In contrast, large capitalisation stocks have an average Amihud Illiquidity of -0.00724, indicating higher liquidity. The standard deviation for small-cap stocks is 0.025978292, showing significant variability in liquidity. In contrast, the standard deviation for big-cap stocks, at 0.009211, is significantly lower than that of small-cap stocks. This lower standard deviation signifies more consistent liquidity levels among big-cap stocks, indicating reduced liquidity risk. Investors in big-cap stocks are likely to experience more stable trading conditions and lower transaction costs as the liquidity levels are less likely to experience substantial fluctuations. The minimum Amihud illiquidity for small-cap stocks is -0.200782752, meaning some small-cap stocks are very liquid. For big-cap stocks, the minimum value is -0.07832, showing that even the least liquid large-cap stocks are more liquid compared to the most liquid small-cap stocks. The maximum values reveal that small-cap stocks have a maximum liquidity of 0.057924462, while big-cap stocks have a maximum value of 0.006675, indicating that large-cap stocks generally exhibit higher liquidity. Overall, small-cap stocks tend to have lower liquidity and greater variability, whereas large-cap stocks are more liquid and have more consistent liquidity levels.

Table 6. Descriptive Statistics before and during Covid-19

Amihud ILLIQ	Mean	St. Deviation	Minimum	Maximum
Before Covid-19	0.004085695	0.007472806	2.83061E-07	0.03853809
During Covid-19	-0.01058144	0.032228359	-0.158751142	0.04777556

Before COVID-19 (2015-2019), the average Amihud ILLIQ was 0.0041, reflecting stable liquidity with low volatility (standard deviation of 0.0075) and a range from nearly zero to 0.0385 suggesting that trading volumes moderately influenced price changes. During Covid-19 (2020-2022), market liquidity increased, with the average Amihud ILLIQ dropping to -0.0106 and increasing variability, indicating heightened market volatility. The COVID-19 pandemic caused significant shifts in market dynamics. Liquidity measures worsened, reflecting decreased market efficiency, while trading volumes surged, indicating increased market activity and volatility. Stock returns

were lower and less variable, reflecting investor uncertainty. Market capitalization remained diverse, suggesting that the distribution of company sizes did not change significantly despite broader market impacts.

Table 7. Correlation between Amihud Illiquidity and Stock Return, Market Capitalisation and Volume Trading

	Stock Return	Market Capitalisation	Volume Trading
Amihud (ILLIQ)	0.09557	-0.09278	0.05331

The analysis shows that Amihud ILLIQ, a measure of liquidity, has a very weak positive relationship with stock returns, meaning that while stocks with higher liquidity might see slightly better returns, the effect is minimal. It also has a weak negative relationship with market capitalisation, indicating that larger companies tend to have slightly lower liquidity, though this connection is not strong. Additionally, the weak positive relationship with volume trading implies a minor association between higher trading volumes and higher liquidity. In summary, based on these correlations, liquidity does not have a significant impact on stock returns, company size, or trading volume.

CONCLUSION

This study focusses on the Amihud Illiquidity to measure Bursa Malaysia stock liquidity. By evaluating 532 stocks, representing nearly half of the total listed stocks in Malaysia, this study provides a critical and detailed view of liquidity within the Malaysian market. The findings show that Malaysian stocks, on average, are liquid. The finding provides a basis for future research that delves deeper into the determinants and implications of liquidity in an emerging market. The insights gained from this study are crucial for more informed decision-making and strategic investment planning.

REFERENCES

- Abudy, M. M. (2020). Retail Investors' Trading and Stock Market Liquidity. *The North American Journal of Economics And Finance*, 54, 101281. <https://doi.org/10.1016/J.Najef.2020.101281>
- Adrian, T., & Shin, H. S. (2010). The changing nature of financial intermediation and the financial crisis of 2007–2009. *Annu. Rev. Econ.*, 2(1), 603-618.
- Aitken, M., & Comerton-Forde, C. (2003). How should liquidity be measured?. *Pacific-Basin Finance Journal*, 11(1), 45-59. [https://doi.org/10.1016/S0927-538X\(02\)00093-8](https://doi.org/10.1016/S0927-538X(02)00093-8)

- Allen, F., Babus, A., & Carletti, E. (2009). Financial crises: theory and evidence. *Annu. Rev. Financ. Econ.*, 1(1), 97-116.
- Amer Al-Jaifi, H., Hussein Al-rassas, A., & Ali AL-Qadasi, A. (2017). Corporate governance strength and stock market liquidity in Malaysia. *International Journal of Managerial Finance*, 13(5), 592-610.
- Amihud, Y. (2002). Illiquidity And Stock Returns: Cross-Section And Time-Series Effects. *Journal Of Financial Markets*, 5(1), 31-56. [https://doi.org/10.1016/S1386-4181\(01\)00024-6](https://doi.org/10.1016/S1386-4181(01)00024-6)
- Amihud, Y., Hameed, A., & Zhang, H. (2022). Global Evidence on the Premium for Market Illiquidity. *Macroeconomic Review*, 21, 95-102.
- Amihud, Y., & Mendelson, H. (1986). Liquidity and stock returns. *Financial Analysts Journal*, 42(3), 43-48.
- Batten, J. A., & Vo, X. V. (2014). Liquidity and return relationships in an emerging market. *Emerging Markets Finance and Trade*, 50(1), 5-21.
- Bogdan, S., Baresa, S., & Ivanovic, S. (2012). Measuring Liquidity on Stock Market:
- Brunnermeier, M. K. (2009). Deciphering the liquidity and credit crunch 2007–2008. *Journal of Economic perspectives*, 23(1), 77-100.
- Brunnermeier, M. K., & Pedersen, L. H. (2009). Market liquidity and funding liquidity. *The review of financial studies*, 22(6), 2201-2238. <https://doi.org/10.1093/rfs/hhn098>
- Cakici, N., & Zaremba, A. (2021). Liquidity And the Cross-Section of International Stock Returns. *Journal Of Banking & Finance*, 127, 106123. <https://doi.org/10.1016/j.jbankfin.2021.106123>
- Chebbi, K., Ammer, M. A., & Hameed, A. (2021). The COVID-19 pandemic and stock liquidity: Evidence from S&P 500. *The Quarterly Review of Economics and Finance*, 81, 134-142.
- Chia, Y. E., Lim, K. P., & Goh, K. L. (2020). Liquidity and firm value in an emerging market: Nonlinearity, political connections and corporate ownership. *The North American Journal of Economics and Finance*, 52, 101169.
- Chiang, T. C., & Zheng, D. (2015). Liquidity and stock returns: Evidence from international markets. *Global Finance Journal*, 27, 73-97.
- Chung, K. H., & Chuwonganant, C. (2014). Uncertainty, Market Structure, And Liquidity. *Journal Of Financial Economics*, 113(3), 476-499. <https://doi.org/10.1016/j.jfineco.2014.05.008>
- Chung, K. H., & Zhang, H. (2014). A simple approximation of intraday spreads using daily data. *Journal of Financial Markets*, 17, 94-120.

- Corwin, S. A., & Schultz, P. (2012). A simple way to estimate bid-ask spreads from daily high and low prices. *The journal of finance*, 67(2), 719-760.
- Dinh, N. B., & Tran, H. N. S. (2023). Stock liquidity and stock price crash risk: Evidence from Vietnam. *Cogent Business & Management*, 10(3), 2277481.
- Fong, Y. L., Holden, C. W., & Trzcinka, C. (2017). What are the best liquidity proxies for global research? *Review of Finance*, 21(4), 1355–1401
- French, J. J., & Taborda, R. (2018). Disentangling the relationship between liquidity and returns in Latin America. *Global Finance Journal*, 36, 23-40.
- Ghasemi, M., & Ab Razak, N. H. (2016). The impact of liquidity on the capital structure: Evidence from Malaysia. *International journal of economics and finance*, 8(10), 130-139.
- Goyenko, R. Y., Holden, C. W., & Trzcinka, C. A. (2009). Do liquidity measures measure liquidity?. *Journal of financial Economics*, 92(2), 153-181.
- Habib, A., Hasan, M. M., & Jiang, H. (2018). Stock price crash risk: review of the empirical literature. *Accounting & Finance*, 58, 211-251.
- Juhandi, N., Fahlevi, M., Abdi, M. N., & Noviantoro, R. (2019, October). Liquidity, firm size and dividend policy to the value of the firm (study in manufacturing sector companies listed on Indonesia Stock Exchange). In *2019 International Conference on Organizational Innovation (ICOI 2019)* (pp. 313-317). Atlantis Press. <https://doi.org/10.2991/icoi-19.2019.53>
- Kang, W., & Zhang, H. (2014). Measuring liquidity in emerging markets. *Pacific-Basin Finance Journal*, 27, 49-71. <https://doi.org/10.1016/j.pacfin.2014.02.001>
- Kyle, A. S. (1985). Continuous auctions and insider trading. *Econometrica: Journal of the Econometric Society*, 1315-1335. <https://doi.org/10.2307/1913210>
- Le, H., & Gregoriou, A. (2020). How Do You Capture Liquidity? A Review of The Literature On Low-Frequency Stock Liquidity. *Journal Of Economic Surveys*, 34(5), 1170-1186. <https://doi.org/10.1111/joes.12385>
- Lesmond, D. A., Ogden, J. P., & Trzcinka, C. A. (1999). A new estimate of transaction costs. *The review of financial studies*, 12(5), 1113-1141.
- Levine, R. (2003). More on finance and growth: more finance, more growth?. *Review-Federal Reserve Bank of Saint Louis*, 85(4), 31-46.
- Ma, R., Anderson, H. D., & Marshall, B. R. (2016). International stock market liquidity: A review. *Managerial Finance*, 42(2), 118-135.
- Ma, R., Anderson, H. D., & Marshall, B. R. (2019). Risk Perceptions And International Stock Market Liquidity. *Journal Of International Financial Markets, Institutions And Money*, 62, 94-116. <https://doi.org/10.1016/j.intfin.2019.06.001>

- Marozva, G. (2019). Liquidity and stock returns: New evidence from Johannesburg Stock Exchange. *The Journal of Developing Areas*, 53(2), 79-90.
- Naik, P., & Reddy, Y. V. (2021). Stock market liquidity: A literature review. *Sage Open*, 11(1), 2158244020985529. <https://doi.org/10.1177/2158244020985529>
- Næs, R., Skjeltorp, J. A., & Ødegaard, B. A. (2011). Stock market liquidity and the business cycle. *The Journal of Finance*, 66(1), 139-176.
- Pástor, L., & Stambaugh, R. F. (2003). Liquidity risk and expected stock returns. *Journal of Political economy*, 111(3), 642-685.
- Ramos, H. P., & Righi, M. B. (2020). Liquidity, Implied Volatility And Tail Risk: A Comparison Of Liquidity Measures. *International Review Of Financial Analysis*, 69, 101463. <https://doi.org/10.1016/j.irfa.2020.101463>
- Roll, R. (1984). A simple implicit measure of the effective bid-ask spread in an efficient market. *The Journal of finance*, 39(4), 1127-1139.
- Sarr, A., & Lybek, T. (2002). Measuring liquidity in financial markets.
- Stumpp, M., & Scott, J. (1991). Does Liquidity Predict Stock Returns. *Journal of Portfolio Management*, 17(2), 35.
- Suardi, S., Xu, C., & Zhou, Z. I. (2022). COVID-19 pandemic and liquidity commonality. *Journal of International Financial Markets, Institutions and Money*, 78, 101572.
- Tran, L. T. H., Hoang, T. T. P., & Tran, H. X. (2018). Stock liquidity and ownership structure during and after the 2008 global financial crisis: Empirical evidence from an emerging market. *Emerging Markets Review*, 37, 114–133.

RETHINKING ZAKAT INSTITUTIONS' SUPPORT: A CASE STUDY IN TERENGGANU, MALAYSIA

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Abstract

As a means to empower productive asnaf in earning money, several zakat institutions have implemented asnaf entrepreneurship initiatives. A range of entrepreneurial support approaches, including training, coaching, mentorship, funding, and product distribution, have been implemented. Nevertheless, the efficacy of these programs is subjective, as the success rates among asnaf suffer considerable variation. The objective of this study is to investigate the efficacy of various forms of entrepreneurship support that are seen by asnaf entrepreneurs as advantageous for their business performance. The results demonstrate that non-monetary support, such as the provision of goods and other resources, is especially successful in facilitating the expansion of market penetration for asnaf entrepreneurs. Moreover, these types of assistance bolster entrepreneurial abilities, drive, and practical business acumen through interactive activities. This study utilized a qualitative methodology, which included conducting interviews with accomplished asnaf entrepreneurs who have been beneficiaries of zakat organizations in Malaysia. In order to effectively assist asnaf entrepreneurs, this study proposes that zakat institutions and scholars should investigate alternate approaches to support, such as practical business tools and non-monetary aid, beyond traditional training and finance.

Keywords: *Asnaf, asnaf entrepreneur, products, zakat and zakat assistance and SMEs, poor and needy.*

INTRODUCTION

'Skim Bantuan Ekonomi' is an economic development initiative carried out by zakat institutions governed by MAIWP (Majlis Agama Islam Wilayah Persekutuan). According to Abdul Ghafar, Zakaria, Yusoff, Kamaludin, and Abdul Ghani (2017), this initiative include the provision of financial aid, consulting services, and business support to qualified asnafs.

Abdul Hamid (2013) said that the conversion success rate for all asnaf businesses varied between 30% and 60%, which indicates that 3 to 6 out of 10 individuals who previously held asnaf status successfully converted. The significance of this figure resides in the capacity of an individual entrepreneur to create a cascade of advantages. Key benefits encompass employment potential, growth prospects, economic development, and community support. The local multiplier effect is the

beneficial influence on the local economy resulting from the interdependence of expenditure processes (Karlsson, Gråsjö, & Wixe, 2015). It is not sufficient to only assess the conversion rate from asnaf to muzakkis to evaluate the effectiveness of this effort; it also includes other indirect impacts on the economy (Yusoff et al., 2019). The research undertaken by Kayed N & Hassan M (2011) clearly demonstrates that the true influence of entrepreneurship on the future economy is contingent upon the proficiency of the entrepreneurs (Tomczyk, Lee, & Winslow, 2013), the long-term viability of the firm, and the conducive environment (Wan Mohd Nazdrol Wan Mohd Nasir, 2013).

An experienced entrepreneur is distinguished by a heightened level of motivation to accomplish their goals, proficient planning abilities, enthusiasm, effective goal management, adaptability to challenges, and a greater degree of confidence and endurance (Abdul Halim, Said, & Syed Yusuf, 2012). These aforementioned elements are crucial for the attainment of success in the business, especially for asnaf entrepreneurs (Bin Yusoff et al., 2018).

The aim of this study is to examine the different types of entrepreneurial development support provided by zakat organizations to asnaf entrepreneurs. The present study investigates the effectiveness of support interventions in enhancing entrepreneurial skills, mentality, and experience. Therefore, this framework can provide zakat institutions with a means to thoroughly investigate the different types of non-monetary entrepreneurial assistance that have dual advantages: creating company prospects and promoting business sustainability.

LITERATURE REVIEW

In their study, Shiyuti and Al-Habshi (2019) highlighted the implementation of two types of entrepreneurial support for asnaf entrepreneurs by Lembaga Zakat Selangor, a zakat institution in Malaysia: financial resources and non-monetary contributions. Furthermore, LZS actively participates in partnerships with many agencies to provide additional entrepreneurial assistance (Yusoff et al., 2021), such as comprehensive training, promotion, and other associated services.

In contrast, Ibrahim, D., & RuziahGhazali (2014) categorized the beneficiaries of zakat into three specific groups: (1) individuals who are incapable of doing anything other than to support their own lives, (2) individuals who need one-time assistance to overcome their difficult circumstances, and (3) individuals who are currently facing challenges but have the ability to enhance, develop, and advance from the asnaf status (Ibrahim, D., & RuziahGhazali, 2014). The selection process for prospective participants in this asnaf entrepreneurship program is based on the second and third categories. However, Abdul Halim, Said, & Syed Yusuf (2012) suggested that the third group is the most appropriate choice for this programme.

However, Rahman & Ahmad (2011) expressed skepticism over the practicality of this program in attaining success. A program failure has the potential to endanger the monies designated for zakat. Hence, strategic selection of the productive asnaf, together with suitable support, can reduce the probability of failure (Azman A. R,

Mohamad Yazis Ali Basah, Mohammad Nooriz-zuddin Nooh, Mahdir Abdullah, 2016).

In the context of entrepreneurship, Banerjee & Duflo (2011) and Largoza (2016) observed that individuals have a tendency to overestimate their ability to generate profits, which ultimately results in the collapse of their enterprises. Furthermore, Largoza (2016) argued that entrepreneurship is shaped not only by physiological characteristics (Yusoff et al., 2021) but also by the cognitive and logical capacities of the mind. Entrepreneurial success is assessed based on the qualitative and quantitative results, referred to as company accomplishments.

Moreover, Muhamat et al. (2013) highlighted that the asnaf entrepreneur is a distinct cohort of persons with intrinsic impairments who do not possess essential competencies to pursue entrepreneurship. The factors contributing to his failure to obtain loans include inadequate competence, restricted business background, and lack of a professional image (Ismail et al., 2019). However, this is not the definitive conclusion, since there have been many cases of asnaf entrepreneurs who have attained success in their business and thereafter become contributors to zakat income.

METHODOLOGY

The present study employed a qualitative methodology, as recommended by Creswell (2014), which is considered appropriate for investigating and analyzing concepts and themes pertaining to social science subjects. The paradigm of qualitative research will evolve simultaneously with the exploration and inquiry process that directly involves the actual subject in real-time during the investigation. Put simply, the researcher directly addressed the experimental sample of the study. In contrast to conventional quantitative research, this study does not require the development of a hypothesis before the research processes.

In order to gain a more comprehensive understanding of the non-cash entrepreneurship support provided by the zakat institution in Wilayah Persekutuan to an asnaf entrepreneur whose products have achieved international market success in the United Kingdom, France, Brunei, Singapore, and a few other countries, this research employs a single case study approach (Gustafsson, 2017). Therefore, a deliberate approach is being employed in the selection of the informant.

The data gathering method employed in this study was the structured interview. The interview was carried out in person. Upon collecting the data, the researcher transcribed the interview and then sent it back to the informant for verification and validation. This forwarding approach shall be implemented as a means of triangulating the process, namely by gathering data from several sources for the same phenomena (Jick, 1998).

After the compilation of the data, it underwent analysis using two distinct approaches: (1) case study analysis and (2) theme analysis.

The in-depth interview session aims to achieve three primary objectives. The first segment of the interview session was to delineate the obstacles faced by asnaf entrepreneurs in Wilayah Persekutuan. Next, the identification of the alternative

entrepreneurship support obtained by the informant was followed by an analysis of the key factors that contributed to the success of the firm.

DATA ANALYSIS

Informant profile

Born in 1967, Mr. Z is a male entrepreneur of Asnaf descent. His most advanced level of schooling is a Technical Certificate obtained from Institut Kemahiran Malaysia. Beginning his professional journey as a technical instructor at GIAT MARA, he dedicated 16 years to the cushion area. Presently, this particular area has been transferred to the sewing section. With his resignation from GIAT MARA in 2006, Mr. Z embarked on his entrepreneurial career. Initially, he served as an operational partner to establish and manage a private training institute which offered technical certification under Majlis Latihan Vokasional Kebangsaan (MLVK). This enterprise was conducted at Raub, Pahang, on a 6-acre plot of land. In order to educate 250 pupils from Lim Kok Wing, Perbadanan Tabung Kemahiran (PTK) proposed and approved the scheme. The objective of this initiative was to provide technical skills training to unemployed graduate students. The curriculum comprised a 2-year duration, with 6 months allocated for level 1, 6 months for level 2, and 1 year for level 3. Nevertheless, this enterprise experienced ultimate failure after a span of four years as a result of misinterpretation among the investing partners. Following his departure from Raub, Mr. Z returned to Terengganu.

At Terengganu, Mr. Z and his wife became partners in his sister's firm to manage a furniture workshop, earning daily salaries of RM100 and RM50, respectively. In 2016, Mr. Z and his wife made the firm decision to establish their own workshop with an initial investment of RM4000. In that same year, he obtained assistance from MAIDAM over the acquisition of industrial sewing machines. Before embarking on this entrepreneurial endeavor (from 2010 to 2016), Mr. Z and his family were beneficiaries of monthly food aid from MAIDAM, specifically under the Muallaf category. His wife, who is of Chinese descent, converted to Islam.

Originally equipped with a single industrial sewing machine, Mr. Z now possesses four sewing machines, one of which is supplied by MAIDAM. Mr. Z has broadened his range of services to include custom cushioning for boats and ships. At his disposal, Mr. Z possesses seven boats/ships that are now undergoing construction. Furthermore, the workshop is functioning according to its regular operations.

The Challenges

Issues Mr. Z demonstrated that a little amount of capital does not hinder the possibility of success for an entrepreneur. He posits that the paramount capital for an entrepreneur to achieve success is willingness and excitement. Otherwise, the business will go out of existence. Mr. Z emphasized the difficulties faced by asnaf firms engaged in the sale of supplied business equipment, tools, or machinery. At the

time of application, the entrepreneur may possess complete dedication to managing the organization. Nevertheless, due to the extended duration of the process, several events will occur that could potentially alter the position. The entrepreneur thus loses enthusiasm for managing the business. Therefore, instead of allowing the equipment, tools, or machines to run idle, he/she opts to transform them into cash by selling them. Stated differently, this problem presents two obstacles: (1) a dearth of enthusiasm in the business sector and (2) the duration of the help application process.

Instances also existed where the circumstances faced by businesses were a direct consequence of the actions of others. An entrepreneur has the authority to grant permission for others to use their name for the purpose of owning and managing the firm. He/she may or may not derive any advantage from the firm, but in the event of any mishap, the owner of the name assumes entirely responsibility. Mr. Z cited several instances in which the owner of the name was subjected to blacklisting as a result of this criteria. Although he appears to be unsuitable for the aid based on his physical appearance and qualifications, the circumstances have caused him financial hardship and psychological strain. Any support that fails to recognize the underlying source of the problem may not effectively address the actual problem.

Moreover, Mr. Z emphasised the difficulty of operating a thriving enterprise in Terengganu. Given the restricted client base, entrepreneurs frequently engage in more intense competition based on pricing. Entrepreneurs often demonstrate a willingness to lower the price to the breakeven point, provided they are able to ultimately finalize the transactions. Consequently, these entrepreneurs endangered the quality of their products by opting for more affordable raw materials. One of the most challenging situations arises when inferior raw materials are acquired at an elevated cost as a result of the credit conditions offered by the supplier. Business owners often fail to recognize the concealed expenses, which can significantly reduce the breakeven point to a point of financial loss. When customers of this nature approach Mr. Z, they express dissatisfaction with the pricing, as Mr. Z provides high-end items, sourced from premium raw materials.

Mr. Z noted that all entrepreneurs concentrate on a solitary endeavor. Absence of activity results in the entrepreneur being idle and taking no action. The aforementioned circumstance results in entrepreneurs engaging in competition for clients. Mr. Z, drawing from his expertise, opts to manufacture furniture items that are readily available for sale in public markets. This implies that there is no unused time available for an entrepreneur.

Mr. Z underscored that challenges, trials, and adversities serve as reservoirs of fortitude for him to reach this point. He is of the opinion that adopting a positive mindset has altered his outlook on the various challenges that have consigned him to poverty. Mr. Z thinks that adequate entrepreneurial intention is a prerequisite for an entrepreneur to achieve success. Through the possession of this purpose, one can avoid any feelings of regret or loss of hope, so enabling them to persist in their endeavors in both life and business.

According to Mr. Z, entrepreneurship also presents a notable health related obstacle. It is crucial for entrepreneurs to prioritize their health, as the sustainability of the business relies on the well-being of the owner. This is particularly crucial for asnaf entrepreneurs, as the successful functioning of the business may depend on the entrepreneur's good health.

Alternative Entrepreneurship Support

Support for Alternative Entrepreneurship According to Mr. Z, the business ecology is of utmost importance. He suggested establishing a workshop facility to manufacture sofa and cushion-based products, employing members of the asnaf community. This facility plays a crucial role in providing training and enhancing the technical abilities of asnaf with the aim of improving their capacity and increasing their income. In his opinion, this method has the potential to assist productive asnaf who face entrepreneurial constraints, such as those who possess the ability to work but lack technical expertise or commercial acumen. Mr. Z volunteered himself and recommended any 'graduated asnaf' possessing appropriate technical skills to serve as mentors and trainers for this programme.

Furthermore, Mr. Z emphasized the crucial role of oversight and monitoring in ensuring the viability of this ecosystem. The monitoring should extend beyond the degree of completion of the program and should persist until the participants attain maturity and are capable of independent operation. According to him, their experience in GIAT MARA revealed that participants achieved success in establishing enterprises using funds contributed by their parents. Nevertheless, these enterprises were short-lived due to the absent entrepreneurial drive and abilities among the participants. Therefore, he proposed that this ecosystem has the potential to thrive if executed with appropriate participant selection and consistent monitoring and oversight.

Mr. Z emphasised the advantages of establishing a centralised production facility. According to him, thorough cooperation among asnaf enterprises, together with proper supervision, has the potential to provide high-quality and more affordable items. The concept is very similar to that of a factory, where large-scale procurement of raw materials, specialization in production operations, and professional management can be carried out. Concerning the market, the supply from this manufacturing facility is adequate to meet the demand in Terengganu. Any excess can be allocated to meet the demand of the eastern shore, specifically Kelantan and Pahang. At present, these specific requirements are met by external vendors located in Kuala Lumpur. The transportation cost is one of the elements that contribute to the price growth of the products.

Important Element That Made Business Success

A Crucial Factor Contributing to Business Success Mr. Z emphasised that the qualities of willingness to succeed (Al-Qawiyu) and integrity (Al-Amin) are essential requirement for an entrepreneur to achieve success. He characterizes integrity as the

sense of fairness and proper rivalry. It is imperative to reduce the disparity between employer and employee interactions. The employee should exert diligent and intelligent effort to guarantee the performance of the firm, while the employer should prioritize the well-being of all the workers. This welfare program extends beyond meeting fundamental necessities to guaranteeing a desirable quality of life, with a minimal distance between the owner and the workforce.

Mr. Z underscored the significance of iman (faith) in the realm of an asnaf entrepreneur. It is imperative for an asnaf entrepreneur to strictly follow the principles of Islam, whether in interpersonal relationships (muamalat) or interactions with the Supreme Allah SWT (ibadah). Furthermore, he emphasized that patience is a fundamental internal quality for an asnaf entrepreneur. A fundamental and timeless aspect that should be deeply ingrained in the self-identity of an asnaf entrepreneur.

Mr. Z recounted an anecdote that involved managing a challenging client. A disgruntled client visited the business and physically assaulted a meticulously repaired sofa on the premises. The sofa structure remained encased in a rubber-padded cushion. The frame was rather rigid and inflicted potential injury to the customer's leg. Mr. Z experienced distress but retained his irritability. He calmly advised the customer against intentionally kicking the frame, since it was still in skeleton state and could cause injury to the customer's leg if kicked improperly. According to his explanation, if the frame was damaged, it could be restored; but, if the customer sustained injuries, the repair would not be worthwhile. Any topic can be deliberated of. Should Mr. Z be unable of completing the task, he would prefer not to receive any remuneration. Mr. Z stressed that he will not serve a customer again if he is unable to meet their specified service specifications. There may exist alternative workshops that can align with the preferences of the client. It might be asserted that Mr. Z's policy is to familiarise himself with customers.

Mr. Z emphasised that trust is the key attribute that an entrepreneur must uphold. It is imperative that trust remains unbroken under all circumstances. Occasionally, clients seek a quote by submitting photographs of a damaged sofa. While the photographs may seem that the conditions are not particularly poor, in actuality, they are far worse. Nevertheless, upon the issuance of the quotation, Mr. Z pledges to uphold the commitment, regardless of the issue of transparency and accurate disclosure. Without exception, he shall do maximum effort to uphold trust and refrain from violating any contractual agreements.

Mr Z holds a somewhat divergent viewpoint on the qualities that define a devout Muslim. According to him, perfection in entrepreneurship is not a prerequisite for being a devout Muslim. The outcome is contingent upon the individual's proficiencies, intentions, and circumstances. An exemplary Muslim should possess integrity, reliability, and strictly implement the tenets of Islam in every facet of life, including commercial matters. Yet, not everyone possesses the innate qualities necessary to become an entrepreneur. Certain individuals may demonstrate exceptional proficiency in other domains, like as education, healthcare, or public service, while nonetheless being regarded as morally upright Muslims.

He contends that although achieving entrepreneurial success can indicate diligent effort and commitment, it does not automatically indicate conformity to Islamic principles. Consistently upholding integrity, honesty, and faith is crucial in all pursuits, be it in business or any other domain. Mr. Z underscores that commercial expertise is really a secondary factor to character and intention in achieving success in entrepreneurship. He maintains that the paramount importance lies in making a constructive contribution to society, whether by means of entrepreneurship or other methods, while being faithful to Islamic principles.

Ultimately, Mr. Z's involvement as an asnaf entrepreneur has imparted him with immense insights on the significance of honesty, perseverance, and belief. Although he has encountered many obstacles, he has also cultivated a profound comprehension of the essential elements for achieving success in the entrepreneurial realm. His proposed alternative entrepreneurial support structure demonstrates his dedication to assisting others in the asnaf community in overcoming their own obstacles and attaining success. The narrative of Mr. Z serves as evidence of the potency of tenacity, faith, and a resolute sense of purpose when confronted with challenges.

FINDING

The following schedule delineates the notable achievements and activities in Mr. Z's entrepreneurial trajectory, elucidating his progression from a technical educator to a prosperous entrepreneur. Commencing in 1989, Mr. Z dedicated more than ten years to teaching technical expertise at GIAT MARA before embarking on business in 2006. He charted a trajectory characterized by early achievements, succeeded by obstacles such as corporate failure and financial hardship. With unwavering determination, Mr. Z moved to Terengganu, where he and his wife founded their own workshop, progressively growing their business. The timetable emphasizes significant events that influenced his professional trajectory, restating his dedication to excellence, honesty, and the welfare of his family and society. Furthermore, it demonstrates his progressive mindset, exemplified by his vision to establish a workshop facility with the purpose of developing asnaf businesses through training and cooperation.

Table 1

Time Period	Event/Action	Details
1989-2005	Technical Teaching Career	Worked as a technical teacher at GIAT MARA in the cushion section.
2006	Start of Entrepreneurship	Left teaching to start a private training institute in Raub, Pahang, offering technical certification.
2006-2010	Private Training Institute	Operated a business training 250 students with technical skills under MLVK, but business collapsed due to partner disputes.
2010-2016	Return to Terengganu	Joined sister's furniture workshop with his wife, working on daily wages.
2016	Own Workshop Establishment	Started a furniture and cushion business with RM4000 capital and support from MAIDAM (industrial sewing machines).
2016-Present	Business Expansion	Expanded services to include cushions for boats/ships; now operates with 4 sewing machines.
Ongoing	Entrepreneurial Challenges	Faced competition, pricing issues, and health challenges; emphasized integrity, trust, and health maintenance.
Future Proposal	Workshop Center Proposal	Suggested creating a workshop center for asnaf to produce sofa and cushion products, with a focus on training and collaboration.
Daily Operations	Focus on Quality and Integrity	Continues to maintain high product standards, transparency, and customer trust in all business operations.

The schedule below outlines the significant milestones and actions in Mr. Z's entrepreneurial journey, detailing his transition from a technical teacher to a successful business owner. Beginning in 1989, Mr. Z spent over a decade imparting technical skills at GIAT MARA before venturing into entrepreneurship in 2006. His path was marked by initial successes, followed by challenges such as business collapse and financial distress. Undeterred, Mr. Z relocated to Terengganu, where he and his wife established their own workshop, gradually expanding their business. The schedule highlights key moments that shaped his career, underscoring his commitment to quality, integrity, and the well-being of his family and community. It also reflects his forward-thinking approach, including his proposal to develop a workshop center aimed at empowering asnaf entrepreneurs through training and collaboration.

The study of Mr. Z's entrepreneurial journey reveals a series of valuable lessons that are essential for achieving long-term success in business. His experiences, from overcoming financial challenges to building a thriving workshop, illustrate the importance of core principles such as integrity, enthusiasm, and adaptability. These lessons, derived from real-world challenges and triumphs, highlight the critical role of personal qualities, ethical practices, and continuous learning in navigating the complex landscape of entrepreneurship. By examining Mr. Z's path, we gain insights into the key factors that contribute to sustained entrepreneurial success, particularly for those facing similar circumstances.

Lessons Toward Entrepreneurship Success:

- a) Integrity and Trust: Uphold honesty and reliability in all business dealings, even when faced with difficult situations.

- b) Willingness and Enthusiasm: These are more important than capital; they are the driving forces behind sustaining a business.
- c) Health and Well-being: Take care of personal health, as the success and continuity of the business depend on the entrepreneur's well-being.
- d) Right Intention: Have the correct entrepreneurial intention, which helps in maintaining focus and resilience through challenges.
- e) Adaptability and Resourcefulness: Be prepared to adapt and find alternative solutions, like Mr. Z's proposal for a collaborative workshop center to overcome limitations.
- f) Continuous Learning and Supervision: Emphasize the importance of continuous training, monitoring, and mentoring to ensure long-term success.

These lessons highlight the significance of personal qualities, ethical practices, and a supportive business ecosystem in achieving long-term entrepreneurial success

CONCLUSION

This initiative is a novel strategy included into the zakat distribution system to enable industrious asnaf entrepreneurs to become autonomous sources of income for themselves, their families, and the broader society. A range of approaches, including financing, training, mentorship, and collaborative ecosystems, have been implemented, demonstrating different levels of effectiveness in producing outcomes. The analysis of Mr. Z's business trajectory underscores the significant obstacles encountered by asnaf entrepreneurs, namely in the domains of financial limitations, health concerns, and the necessity for ongoing assistance and oversight. Health was recognized as a significant obstacle that can endanger an individual's financial security and standard of living. During challenging periods, robust familial relationships were crucial in offering assistance. Meanwhile, the function of zakat institutions goes beyond providing cash assistance; they also contribute by enabling commercial prospects and establishing sustainable ecosystems.

Mr. Z's experience exemplifies that the determination to achieve success, honesty, and a conducive business environment are crucial factors for entrepreneurial viability. The concept for a workshop center for asnaf emphasizes the need of offering ongoing training, supervision, and mentorship to develop skills and maintain effective business operations. Moreover, his focus on honesty and confidence highlights the important of ethical standards in the realm of business.

Furthermore, the research highlights the need of a conducive business environment that provides alternative support systems such as manufacturing facilities, large-scale procurement, and cooperative entrepreneurial models. The implementation of these strategies has the potential to enhance the ability of asnaf businesses to surmount constraints and attain sustainability.

Potential future research could investigate alternative non-monetary entrepreneurship support techniques that could have a substantial influence on firm performance. Nevertheless, the task of duplicating these mechanisms in other zakat

organizations and diverse asnaf entrepreneurs must be approached with meticulous deliberation and planned execution.

REFERENCE

Book

- Abdul Hamid, H. 2013. *Jejak-Jejak Kejayaan Asnaf: Pengalaman LZS Memperkasa Asnaf Zakat*. Lembaga Zakat Selangor.
- Duflo, E., & Banerjee, A. 2011. *Poor economics* (Vol. 619). New York: PublicAffairs.
- Creswell, J. W. 2014. *Research design: Qualitative, quantitative, and mixed method. Research design Qualitative quantitative and mixed methods approaches*.
- Karlsson, C., Gråsjö, U., & Wixe, S. 2015. *Innovation and Entrepreneurship in the Global Economy: Knowledge, Technology and Internationalization*. Edward Elgar Publishing.
- Kayed N, R., & Hassan M, K. 2011. *Islamic Entrepreneurship* (1st ed.). Abingdon, Oxon: Routledge Taylor & Francis Group.
- Largoza, G. L. 2016. Measuring Entrepreneurial Aptitude: An Analytical (Not Psychological) Approach, 4.

Journal

- Abdul Ghafar, M. S., Zakaria, Z., Yusoff, R., Kamaludin, M. A., & Abdul Ghani, A. (2017). Model Pembangunan Usahawan Asnaf Muidam (PUASMA). *Proceedings of the International Conference on Islam, Development and Social Harmony in Southeast Asia*, 111–124.
- Abdul Halim, H., Said, J., & Syed Yusuf, S. N. (2012). Individual Characteristics of the Successful Asnaf Entrepreneurs: Opportunities and Solutions for Zakat Organization in Malaysia. *International Business and Management*, 4(2), 41–49.
- Azman A. R, Mohamad Yazis Ali Basah, Mohammad Noorizzuddin Nooh, Mahdir Abdullah, A. A. M. F. & M. F. A. B. (2016). Program Usahawan Bagi Memperkasakan Ekonomi Golongan Asnaf: Pemantauan Dari Aplikasi Myema. *Pengurusan, Jurnal Fatwa, Penyelidikan*, 7, 29–38.
- Bin Yusoff, M.N.H., Al Mamun, A., Ibrahim, M.D., Hassan, H. (2018). Measuring and comparing functional business skills and knowledge among Asnaf community in Malaysia, *Economics and Sociology*, 11(2), pp. 229–247.
- Gustafsson, J. (2017). Single case studies vs. multiple case studies: A comparative study. *Academy of Business, Engineering and Science Halmstad University, Sweden*, 1–15.

- Ibrahim, D., & Ruziah Ghazali, D. (2014). Zakah as an Islamic Micro-Financing Mechanism to Productive Zakah Recipients. *Asian Economic and Financial Review*, 4(1), 117-125., 4(1), 117–125.
- Ismail, M., Zainol, F.A., Yusoff, M.N.H., Rusuli, M.S.C. (2019). The driving force of the business sustainability model among co-operatives in Malaysia, *Journal of Social Sciences Research*, 5(3), pp. 826–829.
- Jick, T. D. (1998). Mixing Qualitative and Quantitative Methods: Triangulation in Action. *Journal of Physics Condensed Matter*, 10(45), 10241–10248.
- Muhamat, A. A., Jaafar, N., Rosly, H. E., & Manan, H. A. (2013). An appraisal on the business success of entrepreneurial asnaf An empirical study on the state zakat. *Journal of Financial Reporting and Accounting*, 11(1), 51–63.
- Rahman, R. A., & Ahmad, S. (2011). Strategi Pembangunan Keusahawanan Asnaf Fakir dan Miskin melalui Agihan Bantuan Modal Zakat. *Jurnal Pengurusan*, 33, 37–44. <https://doi.org/10.17576/pengurusan-2011-33-03>
- Rosbi Abd Rahman, & Sanep Ahmad. (2011). Strategi Pembangunan Keusahawanan Asnaf Fakir dan Miskin melalui Agihan Bantuan Modal Zakat. *Jurnal Pengurusan*.
- Shiyuti, H. A., & Al-Habshi, S. M. (2019). An Overview of Asnaf Entrepreneurship Program by Lembaga Zakat Selangor, Malaysia. *SSRN Electronic Journal*.
- Tomczyk, D., Lee, J., & Winslow, E. (2013). Entrepreneurs' Personal Values, Compensation, and High Growth Firm Performance. *Journal of Small Business Management*, 51(1), 66–82.
- Yusoff, M.N.H. and F.A. Zainol (2014). The public business support services: Does it really works? . *Asian Social Science*, 10(14).
- Yusoff, M.N.H.B., Zainol, F.A., Ismail, M., ...Razik, M.A., Afthanorhan, A. (2021). The role of government financial support programmes, risk-taking propensity, and self-confidence on propensity in business ventures, *Sustainability (Switzerland)*, 13(1), pp. 1–16, 380.
- Yusoff, M.N.H.B., Zainol, F.A., Ridzuan, R.H., Ismail, M., Afthanorhan, A. (2021). Psychological traits and intention to use e-commerce among rural micro-entrepreneurs in malaysia, *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), pp. 1827–1843.
- Wan Mohd Nazdrol Wan Mohd Nasir. (2013). Performance: evidence from small and medium enterprises in Malaysia. *Wan Mohd Nazdrol Bin Wan Mohd Nasir B.A.*, 1–277.

PRELIMINARY STUDY ON THE PRESENCE OF MICROPLASTICS IN SEDIMENT TAKEN FROM SUNGAI BATANG BENAR, NILAI

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Abstract

A total of 30 sediment samples has been collected from 5 different sampling stations collected along Sungai Batang Benar, Nilai for microplastics assessment. A total of 4449 microplastics with different size, shape and colour were detected. A total of ten different colours of microplastic have been identified with black colour seem to be the most common. The most common shape of microplastics are fibre followed by fragment and film. The abundance of microplastics in the sediments was expected due to activities at the surrounding of the sampling stations such as industrial activities, urbanisation and littering.

Keywords: Microplastic, sediment, pollution, health, surrounding.

INTRODUCTION

Microplastics (MPs) are tiny pieces of plastic which is less than 5 mm in length. MPs result from the breakdown of larger plastic items or are manufactured as small particle in a variety of products such as cosmetics and synthetic clothing. Once in the environment, MPs can persist for a long time and pose risks to wildlife and ecosystems. MPs can spread out in the sea through water movements (Ng et al. 2006). MPs can also carry other pollutants that can cause damage inside the animals (Horton et al. 2017).

Studies on MPs in rivers and sediments in Malaysia were still lacking. Research in this topic should be done to increase community awareness among Malaysian since not many of them are fully aware about the threat of MPs to human health. Sungai Batang Benar is chosen in this study to assess the presence of MPs in the sediment because this river is exposed to pollution risks due to its proximity to industrial areas, livestock farms, and waste disposal sites. In 2020, The river has faced pollution problems caused by an organic compound known as dimethyl disulfide which led to water supply disruptions affecting a significant number of consumers in nearby areas. The route of Sungai Batang Benar which spans approximately 0.8 km passes through

tropical rainforest, making it a pleasant spot for hiking and enjoying nature. The major tributaries of Sungai Batang Benar include Sungai Anak Air Garam and Sungai Belihoi¹. These tributaries contribute to the overall flow and ecosystem of Sungai Batang Benar.

METHODOLOGY

Sampling Stations

Along the stretch of Sungai Batang Benar, a total of 5 sampling stations have been chosen (Figure 1). Global positioning system (GPS) equipment was used to locate the position of each sampling stations. The sediment samples were collected using shovel or spade with 3 replicates in all stations and put into the plastic bag. The sampling process was conducted only 3 to 5 cm depth from the top of the sediment as the MPs usually presence there as the biofouling process make the MPs density higher than water. Concentrations of MPs by area of surface have been recorded in several investigations (Kumar et al. 2022).

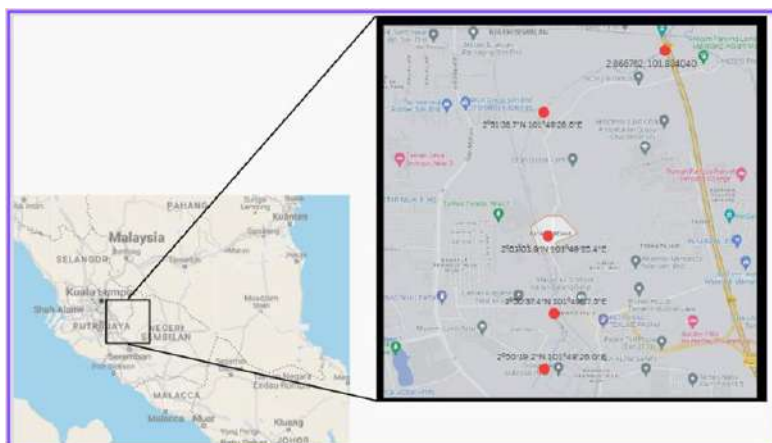


Figure 1: The sampling points locations (●) along the overall stretch of Sungai Batang Benar in Nilai, Negeri Sembilan.

Sample Preparations.

The collected sediment samples were dried in the oven with temperatures ranging from 40 °C to 100 °C. The use of higher temperatures is avoided in this study since it could caused some typical polymeric material such as such as polyester-based fibres, to melt or chemically degrade. As a result, MPs particles clump together to form sediment crops rendering further separation processes futile.

The dried samples were then weighed and recorded. A portion of the dried samples (200 g) were kept in the oven for 5-7 days at 45 °C (Scherer et al. 2020). After the complete drying process, 50g of dried sediment sample was taken and divided into two which was 25g each and put into the glass jar to avoid contamination. A total of 6 replicates of sediments for each sampling station has been prepared. Figure 2

shows the flow chart diagram for the overall research methodology conducted in this study.

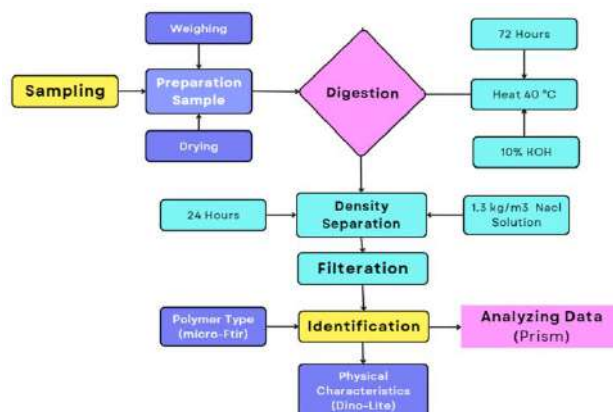


Figure 2: The experiment flow chart for assessment of MPs presence in sediment taken from Sungai Batang Benar.

Sample Digestion.

The dried sediment samples were digested with 80 ml of 10% KOH. The solution was put into the jar with the samples then being swirl slowly and carefully. Then the jars were put into the oven and being heat for 72 hours at 40 °C temperature to digest the organic matter.

Breaking down the dried sediment sample with acid could affects the quality of plastics. For this purpose, MPs made from PE, PS, PP, PA and PVC (10 particles each) were incubated in 33 mL of the 10:1 mix of 30% H₂O₂ and 10% H₂SO₄ for 5 days at a temperature of 55 °C. Next, recovery rates was determined by looking at the number of particles and total surface area.

Density Separation and Filtration

The density separation process was done to separate MPs from sediment samples by using the sediment microplastic isolation (SMI) unit which was much easier than the classical procedure. It was using the column filled with solution of NaCl with density of 1.3 kg/m³ then the samples were put into the column and shacked slowly without spill it. After that the SMI unit was leaved for 24 hours for MPs going to the top of column and the sediments going downward.

The samples obtained during density separation were filtered using glass microfibre filters. A Whatman filter paper with size range of the 1.2 µm was used for this purpose. Filtration process was necessary to prepare the sample for MPs analysis and counting.

Physical Characteristics and Polymer Identification

MPs on the filter paper were visually inspected and photographed (30-50 magnification) with a digital handheld microscope (Dino-lite, AM3011T) and the

application of the Dino Capture 2.0 software. Images of suspicious nanoparticles were captured immediately on the screens.

About 100 MPs from the sample were collected randomly for spectroscopy analysis to confirm and identify the type of polymer. The collected particles were analyzed using Micro-Fourier Transform Infrared (μ -FTIR) spectroscopy to identify the functional groups associated with the polymer chemical properties. Before the analysis, the sample vial was rinsed a few times with the ultrapure water and filtered through 13 mm, 0.2 μ m alumina oxide filter membrane and let it dried. μ -FTIR Spectroscopy (Nicolet iN 10, Thermo Fisher, USA) is used where it measures the infrared spectrum of the sample by subjecting the sample to the infrared radiation over a range of wavelengths.

Statistical Analysis

The statistical analysis was performed with GraphPad Prism 7.04 software (GraphPad Software Inc., USA). A simple t-test was conducted to compare MPs levels in sediment samples taken from 5 different locations along Sungai Batang Benar. This application of software was used to analyse the data that were collected either to observe the significant of the abundance of the MPs between sampling locations or the physical characteristics of the MPc such as their type, colour, and size range.

RESULTS AND DISCUSSION

A total of 4449 MPs were detected in the 30 samples of sediment that were collected from 5 different locations along Sungai Batang Benar. The abundance of MPs in sediment samples is shown in Figure 4B. One-Way Anova test with Tukey's multiple comparison test ($p > 0.05$) indicated that the abundance of MPs at different sites seem not to be significant. The highest abundance was recorded at Station 4 (973) whereas the least abundance observed at Station 3 (873). The presence of MPs in Sungai Batang Benar is expected due to littering activities along the river particularly at the urban area.

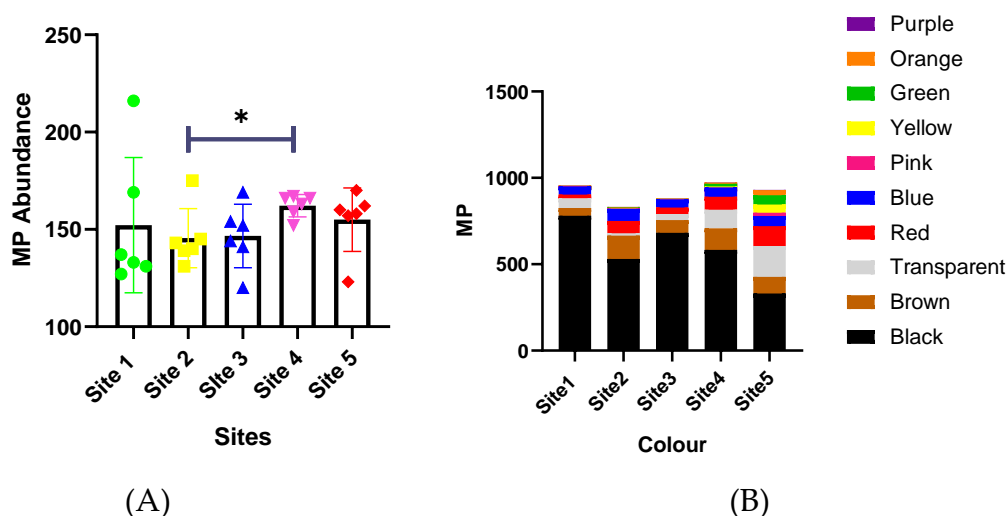


Figure 4: The abundance of MPs at different sampling site along Sungai Batang Benar according to number (A) and colour (B)

As shown in Figure 4B, there were 10 different colours of MPs that have been identified during the study, namely black, brown, transparent, red, blue, pink, yellow, green, orange, and purple. The black MPs seem to be dominant compared to other colour with distribution range of 35.59% (Station 5) to 85.54% (Station 1). Those colours might be influenced by the area around every each of the sites point. Su et al. (2016) also reported that the black colour of MPs is dominantly found in water ecosystems. The dark colour of MPs can be easily detected by the aquatic organisms and mistakenly as a food (Lusher, 2017). Figure 5 shows different colour and shape of MPs images when observed using digital microscope.

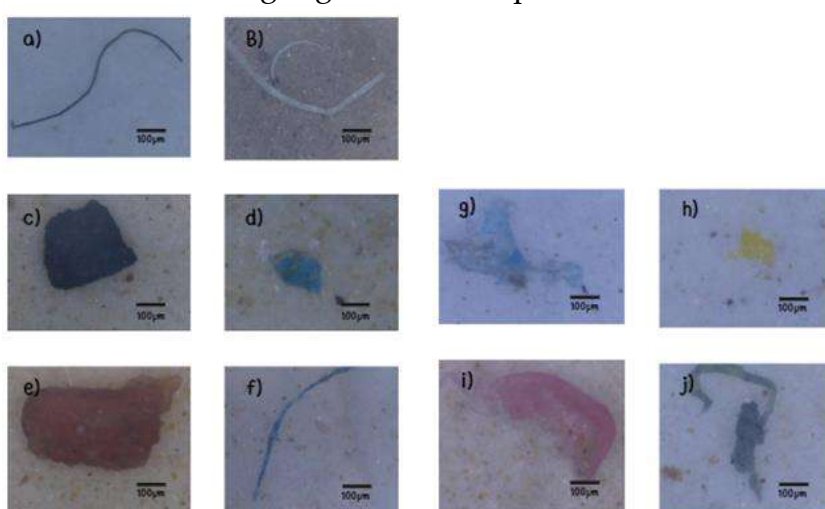


Figure 5: The shapes and colours among of MPs observed using digital microscope, a) black fibre, b) transparent fibre, c) black fragment, d) blue fragment, e) red fragment, f) blue fibre, g) blue film h) yellow fragment, i) pink film, j) green fibre.

In this study MPs have been categorized according to different size ranges A – F (Figure 6). MPs within size range of 0.001 – 0.500 mm (Class A) seem to be the dominant in all sites with abundance range of 67.91% (Station 1) to 88.38% (Station 5). This is followed by Class B with abundance range of 8.06% (Station 5) to 28.81% (Station 1). Class F shows the least abundance with only Station 4 recorded abundance of 0.1%. Based on research by Andrady (2011), MPs particles in smallest size range have been found as the most abundant in bivalve, gastropod and cephalopod. A few research has also shown that fibre MPs with the size range between 0.001 - 1.000 mm is the most detected in water ecosystem (Rochman et al., 2015).

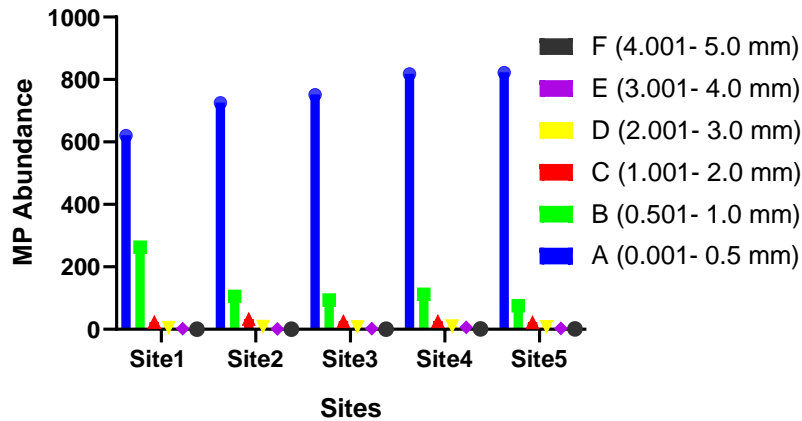


Figure 6: The abundance of MPs in sediment samples collected from different sites according to the size range (A to F).

Figure 7A shows that there were 3 types of MPs morphology, which have been found in the sediments of samples which are fibre, fragment, and film. In this study, the fibre morphology was the most common found in the sediment samples from all the sampling sites, with abundance range of 49.03% (Station 2) to 65.28% (Station 2). It was followed by fragments morphology and films with the least percentage. No foam-type or pellet-shaped morphology of MPs were found in this study. These results showed that the presence of MPs with fibres and fragments morphology were likely to source from the nearby industrial activities along the river. This type also has lower dense as the air bond can carry them away from the surrounding or polymer from the urban and industry into the river.

The study was also conducted to determine the polymeric materials of the MPs. As shown in Figure 7B, it was found that rayon (50%) which was semi-synthetic fibre thread and cellulose fibre thread is the most common type of polymer for MPs found in the sediment. Fibre polymer were spread widely into the river through human activities, such as the waste of washing water that can spread almost 700,000 fibre threads MPs from 6 kg of fabric clothes that usually contain the fibre polymer (Napper & Thompson 2016). Lusher et al. (2013) were reported on identification of rayon in gastrointestinal tract of the fish, whereas Woodall et al. (2015) concluded that the rayon was the type of fibre that dominantly debris into the ecosystem.

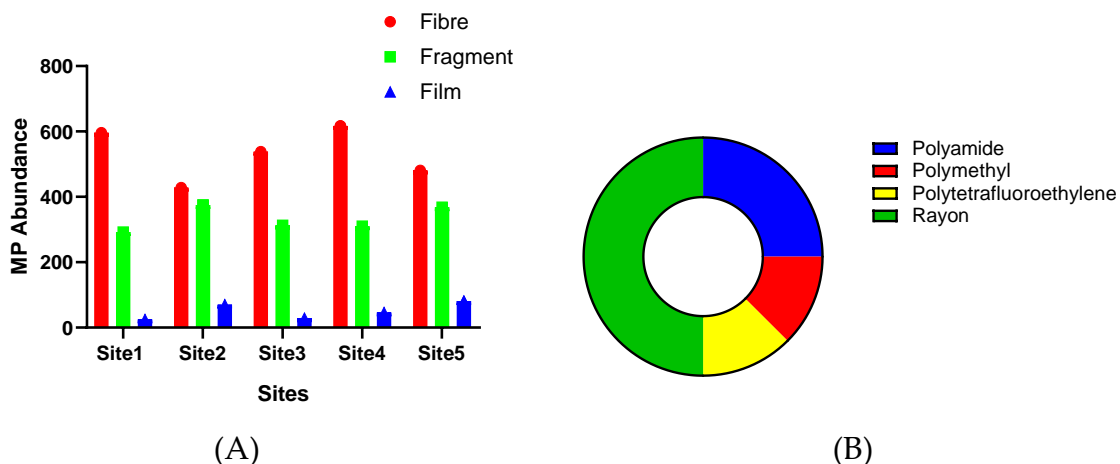


Figure 7: The abundance of MPs according to their type (A) and material (B) that presence between each site. Figure 4.5. 1: Type of polymer found in the sediment.

CONCLUSION

The presence of MPs along Sungai Batang Benar showed that the amount and features of these MPs (shape, size, colour, type) were depending on the location of the sampling stations. The black MPs seem to be dominant compared to other colour. In term of size, MPs with smallest size range of 0.001 – 0.500 mm seem to be the most common. The presence of MPs with fibres and fragments morphology were likely to source from littering activities along the river. Different industrial and human activities introducing different waste to the nearby water outlet such as household wastewater and factory discharge. Disposal of plastic waste a few decades ago to the nearby river is expected to be the main caused of MPs presence in water ways.

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REFERENCE

- Andrady, A. L. (2011). Microplastics in the Marine Environment. *Marine Pollution Bulletin*, 62(8), 1596–1605.
- Horton, A. A., Svendsen, C., Williams, R. J., Spurgeon, D. J. & Lahive, E. (2017). Large microplastic particles in sediments of tributaries of the River Thames, UK – Abundance, sources and methods for effective quantification. *Marine Pollution Bulletin*, 114(1), 218–226

- Kumar, P., Inamura, Y., Bao, P. N., Abeynayaka, A., Dasgupta, R., & Abeynayaka, H. D. L. (2022). Microplastics in Freshwater Environment in Asia: A Systematic Scientific Review. *Water*, 14(11), 1737 – 1745.
- Lusher, A., Hollman, P., & Mendoza-Hill, J. (2017). Microplastics in fisheries and aquaculture: status of knowledge on their occurrence and implications for aquatic organisms and food safety. *FAO Fisheries and Aquaculture Technical Paper*. No. 615. Rome, Italy.
- Lusher, A. L., McHugh, M., & Thompson, R. C. (2013). Occurrence of microplastics in the gastrointestinal tract of pelagic and demersal fish from the English Channel. *Marine Pollution Bulletin*, 67(1-2), 94–99.
- Napper, I. E., & Thompson, R. C. (2016). Release of Synthetic Microplastic Plastic Fibres from Domestic Washing machines: Effects of Fabric Type and Washing Conditions. *Marine Pollution Bulletin*, 112(1-2), 39–45.
- Ng, K. L., & Obbard, J. P. (2006). Prevalence of microplastics in Singapore’s coastal marine environment. *Marine Pollution Bulletin*, 52(7), 761–767.
- Rochman, C. M., Tahir A., William S.L., Baxa D.V., Lam R., Miller J.T., Teh F.C.Werorilangi S. & Teh S.J. (2015). Anthropogenic debris in seafood: Plastic debris and fibers from textiles in fish and bivalves sold for human consumption. *Scientific Reports*, 5, 14340.
- Scherer, C., Weber, A., Stock, F., Vurusic, S., Egerci, H., Kochleus, C. & Reifferscheid, G. (2020). Comparative assessment of microplastics in water and sediment of a large European river. *Science of the Total Environment*, 738, 139866.
- Su, L., Xue, Y., Li, L., Yang, D., Kolandhasamy, P., Li, D., & Shi, H. (2016). Microplastics in Taihu Lake, China. *Environmental Pollution*, 216, 711–719.
- Woodall, L. C., Gwinnett, C., Packer, M., Thompson, R. C., Robinson, L. F., & Paterson, G. L. J. (2015). Using a forensic science approach to minimize environmental contamination and to identify microfibrils in marine sediments. *Marine Pollution Bulletin*, 95(1), 40–46.

INTEGRATING ISLAMIC ACCOUNTING PRINCIPLES IN FINANCIAL ACCOUNTING CURRICULA FOR PRE-UNIVERSITY STUDENTS

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Abstract

This research paper explores the effects of integrating Islamic accounting principles into financial accounting curricula. The study highlights the importance of incorporating Islamic accounting principles concepts alongside conventional financial accounting knowledge. The purpose is to provide a comprehensive understanding of accounting practices grounded in Islamic principles. By examining the potential benefits and challenges of merging Islamic accounting principles into the educational framework for pre-university students, this paper aims to enhance students' proficiency in accounting while fostering an appreciation for ethical and Sharia-compliant financial practices. The primary goal is to develop a comprehensive conceptual framework that effectively integrates Islamic accounting principles into financial accounting curricula, thus enriching the educational experience and strengthening the ethical foundation of pre-university students.

Keywords: *Integration, islamic accounting principles, financial accounting,*

INTRODUCTION

In the modern landscape of global finance, business students must understand various accounting practices. One such practice that is increasingly gaining relevance is Islamic accounting principles. Mohammed and Bakar (2012) stated that the demand for professionals proficient in both conventional and Islamic accounting principles is rising as the financial sector becomes more globalized. The rapid growth of the Islamic finance industry, with assets projected to exceed USD 3.69 trillion by 2024 (Arab News, GCC Business News, ICD-PS), underscores the importance of integrating Islamic accounting principles into mainstream financial accounting curricula at the university level. According to Amalia (2023), incorporating Islamic ethics into accounting education can equip future accountants with the ethical tools necessary to navigate moral dilemmas, potentially reducing fraudulent behavior (Amalia, 2023). Therefore educational institutions play a vital role in shaping society by enhancing skills and knowledge (Universities New Zealand, 2012) and equipping graduates with the expertise needed, particularly in Islamic accounting principles and Finance education (Jamil et al., 2019). Several studies, such as those conducted by Bacheva et al., (2023), reveal a uniformity in higher education accounting programs. Tiago Cunha et al., (2022) criticize the current focus on technical skills in higher education curricula,

while Tunde et al., (2023) highlight the gap between the skills of university accounting programs and the needs of the industry. Despite numerous studies examining the integration of Islamic accounting principles into conventional accounting frameworks, these studies fail to address pre-university education, suggesting a potential area for further investigation (Bacheva et al., 2023). Therefore, a significant research gap exists regarding the integration of Islamic accounting principles into financial accounting specifically at the pre-university level.

This research explores the conceptual integration of Islamic accounting principles into financial accounting curricula. The study aims to develop a conceptual framework for integrating Islamic accounting principles into the financial accounting curricula for the Tamhidi of Accounting Muamalat pre-university program.

LITERATURE REVIEW

Financial Accounting and Islamic Accounting Principles

Traditional financial accounting focuses on recording, summarizing and reporting financial conditions to users to make an informed decision making. This reporting must accordance with accounting standards; International Financial Reporting Standards (IFRS)/ Malaysian Financial Reporting Standards (MFRS) or Generally Accepted Accounting Principles (GAAP). These standards emphasize transparency, consistency, and accuracy (Nobes & Parker, 2016).

Meanwhile, Islamic accounting principles introduces additional principles derived from Sharia law, such as the prohibition of interest (riba) and the requirement for transactions to be asset-backed (Hamid & Lewis, 2007). Prohibition of interest is stated in the Holy Quran in Chapter 2 verse 275; "Those who consume interest cannot stand [on the Day of Resurrection] except as one stand who is being beaten by Satan into insanity. That is because they say, "Trade is [just] like interest." But Allah has permitted trade and has forbidden interest". By avoiding interest-based transactions, Islamic accounting principles principles practices promote financial fairness and ensure that business operations align with Islamic values.

Furthermore, Iqbal and Mirakhor (2007) state that Islamic accounting principles emphasize ethical considerations and social responsibility, aligning financial practices with Islamic moral values. In conclusion, Islamic accounting principles offer a unique perspective compared to conventional financial accounting, which often lacks consideration of Islamic ethical dimensions (Hassan, 2009). Meanwhile, Husin et. Al., (2024) states that Islamic accounting courses should focus on enhancing students' competencies and optimizing business processes, preparing them for real-world applications. Therefore, based on previous studies, it is important to integrate Islamic accounting principles into financial accounting curricula.

The Importance of Integration of Islamic Accounting Principles in Financial Accounting

The integration of Islamic accounting principles into conventional accounting systems is increasingly recognized for its potential to enhance ethical standards and trust in financial reporting. This integration has been explored by several studies with different perspectives such as studies conducted by Jannah (2023), Nasution (2022), and Parte et. al., (2022). Based on previous studies, the significance of integrating Islamic accounting principles into financial accounting is highlighted by the following points:

i) Alignment with Islamic ethics.

Islamic accounting principles are deeply rooted in Islamic ethics, which emphasize the values of truthfulness, fairness, and transparency. These values are aligned with accounting practices and promote ethical behavior and financial responsibility (Jinan et al., 2024). Meanwhile, Jannah (2023) argues that the ethics deficits pervading conventional accounting practice underscore a need to inculcate Islamic values within accountancy education. This approach involves incorporating religious practices such as group prayers and Quranic readings to foster a moral framework among students (Jannah, 2023). Likewise, a different study conducted by Nasution (2022) reveals the significance of Islamic accounting principles as a trust-reinforcing tool specifically in cases where conventional accountancy neglects moral issues.

ii) Promoting Financial Justice

Financial justice is a cornerstone of Islamic accounting principles which aims to ensure fairness in financial reporting by adhering to key ethical guidelines derived from Shariah law such as justice, transparency, and accountability. These principles are important because they structure the way financial statements should be prepared and presented to show an entity's true financial position, thus avoiding any deceptive or manipulation. Research highlights that the principle of justice (adl) in Islamic accounting principles ensures the equitable distribution of profits among stakeholders which is central to maintaining fairness in financial practices (Amar et al., 2023). Furthermore, according to Wahyuni-TD et al.,(2018) all relevant information in financial statements must be disclosed completely to prevent fraud and build trust among stakeholders.

(iii) Ethical Investment and Profit Sharing

Islamic accounting principles also emphasize ethical investment and profit-sharing mechanisms such as mudarabah (profit-sharing) and musharakah (joint venture). The investment made by investors should be in halal (permissible) activities, avoiding interest (riba), gambling, and alcohol (Minhat et al., 2021) while ensuring that financial

transactions are conducted equitably and ethically. This approach prevents exploitation and fostering financial justice (Amar et al., 2023), ensuring that profits are equitably distributed based on contributions and risk (based on mutual cooperation and risk-sharing).

iv) Transparency and Accountability

The principle of accountability (Hibsah) requires that financial statements be clear and honest, reflecting the actual financial conditions of the company without any manipulation. According to Ahmad et al. (2017), principles such as justice, trust, and righteousness are essential for ensuring accountability and transparency in financial reporting. Meanwhile, according to Suryanto and Ridwansyah (2016), the inclusion of Islamic principles such as Amanah (trust) and Ihsaan (benevolence) helps prevent fraud and other unethical activities, ensuring that the financial information presented is reliable and truthful.

v) Social Responsibility

Focusing on ethical investment not only promotes fairness but also enhances the social responsibility of financial institutions. Financial activities should contribute positively to society and promote communal welfare. For instance, donation, *sadaqah*, *waqf* or *zakat* redistribute wealth to those in need. This approach aligns with the teaching of the Quran (2:177).

“Righteousness does not consist in turning your faces towards the east or towards the west; true righteousness consists in believing in Allah and the Last Day, the angels, the Book and the Prophets, and in giving away one’s property in love of Him to one’s kinsmen, the orphans, the poor and the wayfarer, and to those who ask for help, and in freeing the necks of slaves, and in establishing Prayer and dispensing the Zakah. True righteousness is attained by those who are faithful to their promise once they have made it and by those who remain steadfast in adversity and affliction and at the time of battle (between Truth and falsehood). Such are the truthful ones; such are the God-fearing”.

By incorporating Islamic accounting principles, financial institutions can ensure that their operations are not solely profit-driven but also emphasize responsible business practices. This approach fosters trust and sustainability in financial markets, particularly in regions where Islamic values are deeply embedded in the culture and legal system.

Based on the discussion of previous studies, it can be concluded that introducing the integration of Islamic accounting principles into financial accounting becomes increasingly significant. For pre-university students with an Islamic education background such as Tamhidi of Accounting and Muamalat Universiti Sains Islam Malaysia (USIM), incorporating these two elements is not merely beneficial but essential. This approach could provide a more comprehensive educational

background, preparing them to navigate both conventional and Islamic financial systems effectively (Khan & Bhatto, 2008).

CONCEPTUAL FRAMEWORK

Curriculum Content Integration

There has been limited integration of Islamic accounting principles in financial accounting curricula. According to Mohd Salleh et al., (2011), Islamic accounting principles are a well-established practice, however, it is not extensively covered in pre-university curricula and exposure to Islamic accounting principles for undergraduate students is insufficient (Grassa et al., 2022).

The integration of Islamic accounting principles into financial accounting curricula is increasingly vital as it ensure that students are not only proficient in accounting practices but also grounded in ethical values, preparing them to navigate the complexities of the financial world responsibly (Rahma et al., 2024). Furthermore, the incorporation of these principles not only enhances students' ethical awareness (Al-Aidaros et al. 2013) but also helps them appreciate the differences and similarities between Islamic and conventional accounting (Mohamed & Syed Agil, 2016). This comprehensive approach leads to a more robust understanding of global financial systems and equips students to apply these concepts in real-world scenarios.

Curriculum content integration involves blending Islamic accounting principles with conventional financial accounting topics. This integration should encompass the standards developed by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI). Alhabshi et al. (2021) underscore the importance of specialized courses dedicated to AAOIFI's distinctive frameworks. Other studies also emphasize that incorporating AAOIFI guidelines into financial accounting curricula ensures that students are thoroughly prepared in Sharia-compliant accounting practices (Alhabshi et al., 2021). Collectively, these studies highlight that embedding AAOIFI standards within financial accounting education curricula can develop qualified employees equipped with both Islamic and conventional accounting systems.

Pedagogical Approaches

Different methods of teaching should be employed to help in the teaching of the integrated curriculum. This includes every possible approach employed by the educators in their efforts to improve strategies for teaching and learning. Effective pedagogies involve a range of techniques, including whole-class and structured work, guided learning and individual activity. All these approaches are important in creating great learning experiences and in meeting the current educational demands.

The integration of Islamic accounting principles into financial accounting education requires innovative pedagogical approaches to effectively bridge traditional accounting practices with Islamic ethical principle. Rahman et al. (2024) stress the necessity of tailoring Islamic accounting principles education to the specific

characteristics of the Alpha Generation, advocating for the use of modern technology together with other Islamic teaching methods for better engagement and moral capacity. Previous studies have examined the effectiveness of various pedagogical approaches in teaching and learning activities. For example, Zaky and Warsono (2022) reveal that the Quranic approach significantly enhances learning outcomes compared to traditional methods. Meanwhile, another study by Alia and Zaini (2017), found that collaborative learning where students work together on an Islamic accounting principles project, fosters a better understanding of the subject and encourages critical thinking. Furthermore, Ahmad (2019) highlights to implement of instructional approaches that align with the cultural and religious beliefs of the students (Ahmad, 2019).

To enhance teaching and learning processes, it is crucial to innovate the strategies used in teaching Islamic accounting principles, particularly within the context of financial accounting to meet the needs of the modern Muslim professionals. Educators can implement approaches such as case studies, problem-based learning and interactive discussion among students to explore about the Islamic accounting principles topics. The importance of these methods cannot be overemphasized especially in the development of a new Muslim professional cadre that will be sufficiently equipped to deal with the modern practices in the area of financial accounting and meet the regulatory requirements in Islam.

Faculty Development

The successful integration of Islamic accounting principles into the curriculum also depends on faculty development. This suggest that educators should undergo knowledge and skill to enable them teach the Islamic accounting principles concepts effectively. As highlighted by Abdul Rahman and Nor (2018), there is a need for the professional development programs of the faculty members, especially those in Islamic finance and accounting. Such programs may include workshops, seminars and certification courses that are aimed at providing educators with necessary information about Islamic accounting principles and how it can be enforced. Ahmad et. al (2017), suggest that faculty development should include training in ethical principles to foster the moral development of students.

Jamil et al. (2019) highlight the critical role of faculty in embedding sustainability within Islamic accounting principles education, noting that current efforts are insufficiently comprehensive. They suggest that faculty development should focus on incorporating contemporary financial technologies and sustainability concepts to enhance the relevance of Islamic accounting principles education.

Meanwhile, Kibiya et al. (2022) highlight that it is vital for faculty to develop curricula that effectively differentiate Islamic accounting principles from conventional accounting by providing educators with training in both content knowledge and pedagogical strategies. Therefore, by providing continuous professional practice ensures that instructors are always in touch with relevant current trends in Islamic finance and ensure convergence in their training practice.

Curriculum Assessment and Revision

Regular curriculum reviews are essential to incorporate new knowledge and adapt to changing educational demands (Hays et al. 2024) and align with the evolving needs of the students in the industry. One of the mechanisms to measure the relevance and effectiveness of the curriculum is by conducting regular assessments and revisions. Curriculum assessment and revision are critical processes that ensure educational programs meet the evolving needs of students and society. Feedback from students, faculty, and industry professionals can provide valuable insights into areas that require improvement.

The integration of Islamic accounting principles into financial accounting curricula requires a thorough assessment and revision to ensure alignment with both educational and industry standards. Septyan et al. (2023) state that curricula must reflect the holistic nature of Islamic accounting principles, which moves beyond traditional financial accounting frameworks. For example, a study by Ahmad et al. (2019) found that to develop ethical accountants, the curriculum should be revised to integrate Islamic ethics into accounting education. Similarly, Kibiya et al. (2022) suggest that curriculum revision should include Islamic accounting principles courses, such as Zakat, Waqf, and Shariah auditing. Jamil et al. (2019) stress the importance of sustainability in Islamic accounting principles education, particularly in the context of emerging financial technologies. Their findings suggest that curriculum revisions should include elements of sustainability and fintech to ensure that Islamic accounting principles education remains relevant and effective.

As a conclusion, the integration of Islamic accounting principles should be reviewed periodically to ensure that it continues to meet educational and professional standards.

Proposed Implementation Strategies

Implementing Islamic accounting principles within financial accounting education requires comprehensive strategies that consider both theoretical and practical aspects. Several strategies can be proposed to integrate Islamic accounting principles into financial accounting curricula.

Firstly, a phased approach to curriculum integration can be adopted, beginning with the inclusion of basic Islamic accounting principles concepts and gradually introducing more complex topics. Lubis and Ima (2023) emphasize the importance of understanding the ontological and epistemological foundations of Islamic accounting principles to ensure that its implementation aligns with Islamic principles and enhances the overall educational framework. They suggest starting with a deep exploration of Islamic accounting principles concepts, ensuring they are philosophically sound and practically applicable. Additionally, Lawson et al. (2014) discuss the integration of competency-based frameworks into accounting education, recommending that the implementation of Islamic accounting principles include defining clear competencies that students must achieve. This strategy involves

developing curriculum objectives that encompass both accounting skills and Islamic ethical principles, ensuring that graduates are well-prepared for the professional demands of Islamic finance.

Secondly, collaboration with Islamic financial institutions can provide students with practical insights and real-world experience. Radjak and Hiola (2020) highlight the importance of implementing Islamic accounting principles guidelines within specific institutions, such as Islamic boarding schools, emphasizing the need for tailored training and support to ensure successful adoption. Their study underscores the importance of human resources readiness and suggests that implementation strategies should include comprehensive training programs for staff to manage the unique aspects of Islamic accounting principles.

Thirdly, developing partnerships with other educational institutions that have successfully integrated Islamic accounting principles can offer valuable lessons and best practices. Patimbangi and Darwis (2023) explore the implementation of independent learning concepts within Islamic accounting principles curricula, emphasizing the importance of flexibility and practical application through programs like student exchanges and community service. This approach supports the idea that curriculum design should accommodate diverse learning pathways and real-world experiences.

Finally, involving stakeholders, including educators, students, and industry professionals, in the curriculum development process ensures that the curriculum meets the needs of all parties involved. Meng (2019) suggests that integrating financial and management accounting is essential for the effective implementation of Islamic accounting principles. This approach involves training accountants to manage both financial and managerial aspects under the umbrella of Islamic principles, thereby enhancing the coherence and efficiency of accounting processes. Fadzil and Rababah (2012) focus on the role of top management and the adoption of advanced information technologies to facilitate the implementation of new accounting systems, including Islamic accounting principles. They propose strategies that emphasize top management support, technological adoption, and continuous education as critical factors for successful implementation.

CONCLUSION

Integrating Islamic principles into financial accounting education for pre-university students is essential for fostering a strong ethical foundation and ensuring that future accountants are equipped to navigate both the financial and moral dimensions of their profession.

By blending conventional accounting practices with Islamic financial principles, pre-university students gain a comprehensive understanding that prepares them for a diverse and evolving financial landscape. This article provides a framework for creating an effective and sustainable curriculum by focusing on Curriculum Content Integration, Pedagogical Approaches, Faculty Development, Curriculum Assessment and Revision, and Proposed Implementation Strategies.

Future research should explore the long-term impact of such integration on students' academic performance and professional success.

REFERENCE

- Abdul Rahman, A., & Nor, P. M. (2018). Professional development for Islamic accounting educators: A critical need. *Journal of Education for Business*, 93(4), 157-162.
- Ahmad, N. L. B., Yusof, R. B., Mustaffa, W. S. B. W., Wahid, H. B. A., & Halim, H. B. A. (2019). Developing Ethical Accounting Students through Incorporating Islamic Ethics into Accounting Curriculum: The Educator's Perspectives. *International Journal of Academic Research in Business and Social Sciences*, 9(1).
- Ahmad, N. L., Ahmed, H., & Mustaffa, W. S. W. (2017). The significance of Islamic ethics to quality accounting practice. *International Journal of Academic Research in Business and Social Sciences*, 7(10).
- Ahmad, R. (2019). Pedagogical approaches in teaching Islamic accounting principles: A case study in Malaysia. *International Journal of Islamic and Middle Eastern Finance and Management*, 12(2), 231-245.
- Al-Aidaros, A. H., et al. (2013). The importance of ethics in Islamic accounting principles. *Journal of Islamic Accounting Principles and Business Research*, 4(2), 117-127.
- Ali, M., & Zaini, A. (2017). Collaborative learning in Islamic finance education: Opportunities and challenges. *Journal of Islamic Finance*, 6(1), 101-113.
- Alshater, M.M., Hassan, M.K., Sarea, A. & Samhan, H.M. (2022). Islamic accounting principles research between 1982 and 2020: a hybrid review. *Journal of Islamic Accounting Principles and Business Research*, Vol. 13 No. 8, pp. 1176- 1196.
- Amalia, E., & Srimaya, L.S. (2022). Mengintegrasikan Etika Islam Dalam Dilema Etis Dan Pendidikan Akuntansi. *Jurnal Akademi Akuntansi (JAA)*, 5(4), 531-546
- Amar, S. S., Putri, D. L. P., & Rahmawati, R. (2023). Pendidikan Prinsip Keadilan dalam Akuntansi Syariah. *Fikrotuna: Jurnal Pendidikan Dan Manajemen Islam*.
- Azah Abdul Jalil, N., Haron, H., & Bin Muda, M. (2019). The Impact of Islamic Based Accounting Education on Professional Conduct among Accountants: A Conceptual Review. *KnE Social Sciences*, 3(22), 712-725.
- Bacheva, S., Feschiyan D., & Pozharevska R. & Savova, K. (2023) Accounting Education in France, *Godishnik na UNSS, University of National and World Economy, Sofia, Bulgaria*, issue 2, pages 57-73, December.

- Cunha, T., Martins, H., Carvalho, A. and Carmo, C. (2022). Not Practicing What You Preach: How Is Accounting Higher Education Preparing the Future of Accounting. *Educ. Sci.*, 12, 432.
- Fadzil, F., & Rababah, A. (2012). Management Accounting Change: ABC Adoption and Implementation. *Journal of Accounting and Auditing Research & Practice*, 1–17.
- GCC Business News. *Refinitiv & ICD 2020 Report: Global Islamic Finance Assets Expected to Hit \$ 3.69 trillion in 2024* <https://icd-ps.org/en/news/refinitiv-icd-2020-report-global-islamic-finance-assets-expected-to-hit-369-trillion-in-2024>
- Grassa, R., Khlif, H., & Khelil, I. (2022). The development of Islamic accounting principles education in the UAE and its challenges :an institutional perspective. *Journal of Financial Reporting and Accounting*.
- Hamid, S., & Lewis, M. (2007). *Islamic accounting principles: A Practical Guide*. Routledge.
- Hassan, R., & Haron, H. (2017). Assessing the effectiveness of Islamic accounting principles curriculum: A case study in Malaysia. *Journal of Accounting Education*, 39(1), 45-57 16(02), 270–282.
- Hays, R. B., Wilkinson, T., Green-Thompson, L., McCrorie, P., Bollela, V., Nadarajah, V. D., Anderson, M. B., Norcini, J., Samarasekera, D. D., Boursicot, K., Malau-Aduli, B. S., Mandache, M. E., & Nadkar, A. A. (2024). Managing assessment during curriculum change: Ottawa Consensus Statement. *Medical Teacher*, 46(7), 874–884.
- Husain, F., Aisyah, M. R., & Musa, N. (2024). Exploring The Meaning Of Islamic Accounting Courses For Students: A Phenomenological Approach. *JAS (Jurnal Akuntansi Syariah)*, 8(1), 17-36.
- Iqbal, Z., & Mirakhor, A. 2007. *An Introduction to Islamic Finance; Theory and Practice*: Wiley.
- Jamil, N., Seman, J., & Ramli, N. (2019). Does the Islamic accounting principles and finance education sufficiently sustainable?. *International Journal Of Business and Economy*, 1(1), 20-35.
- Jannah, B. S. (2023). Is It Important To Integrate Islamic Values In Accounting Education?. *JAS (Jurnal Akuntansi Syariah)*, 7(1), 30-41.
- Jinan, M. R., Syapiuddin, M., & Nasri, U. (2024). Holistic Integration: Syariah Finance Principles in Islamic Education Management. *Jurnal Ilmiah Profesi Pendidikan*, 9(2), 1343–1350.
- Kibiya, I.U., Usman, M., Kurfi, S.A. & Hamid, K.T. (2023). Awareness and knowledge of Islamic accounting principles system among accounting students in the

- Nigerian universities. *Journal of Islamic accounting principles and Business Research*, Vol. 14 No. 7, pp. 1106-1120.
- Lawson, R. A., Blocher, E. J., Brewer, P. C., Morris, J. T., Stocks, K. D., Sorensen, J. E., Stout, D. E., & Wouters, M. J. F. (2015). Thoughts on competency integration in accounting education. *Issues in Accounting Education*, 30(3), 149–171.
- Lubis, M. S. I., & Ima, I. (2023). Ontology of accounting education in the study of accounting education in the study of accounting implementation. *Dharmawangsa: International Journal of the Social Sciences Education and Humanitis*, 4(3), 93–97.
- Meng, M. (2019). *Analysis of Effective Strategies for the Integration of Financial Accounting and Management Accounting*.
- Minhat, M., Dzolkarnaini, N. & Abdullah, M. (2021). The Integrity of Islamic Finance. In: Minhat, M., Dzolkarnaini, N. (eds) *Ethical Discourse in Finance. Palgrave Studies in Impact Finance*. Palgrave Macmillan, Cham.
- Mohamed, S., & Syed Agil, S. O. (2016). Islamic accounting principles education in Malaysia: History and challenges. *International Journal of Economics, Management and Accounting*, 24(1), 73-90.
- Mohammed, M., & Bakar, N.A. (2012). Islamic Finance and the Global Financial Crisis: A Review. *International Journal of Islamic and Middle Eastern Finance and Management*, 5(2), 135-147.
- Mohd-Salleh, N., et al. (2011). The incorporation of Islamic accounting principles Principles into Accounting Education. *Accounting Education: An International Journal*, 20(2), 137-158.
- Nasution, L. (2022). Akutansi Syariah sebagai media informasi dalam meningkatkan kepercayaan pengguna. *Al-Bay Journal of Sharia Economic and Business*, 1(2), 78–91.
- Parker, R. H. (2016). Thirteen not out: Nobes & Parker, Comparative International Accounting, 1981–2016. *Accounting History*, 21(4), 512–521.
- Parte, L., Garvey, A. M., McNally, B., & Gonzalo-Angulo, J. A. (2022). True and fair view/fair presentation as a nexus between conventional accounting, sustainability accounting and Islamic accounting principles: unifying three frameworks? *Economic Research-Ekonomska Istraživanja*, 36(2).
- Patimbangi, A., & Darwis, R. (2023). Merdeka Belajar Kampus Merdeka Based Curriculum Design for the Sharia Accounting Study Program at Islamic University. *AL-ISHLAH: Jurnal Pendidikan*, 15(4), 4852-4867.
- Radjak, L. I. ., & Hiola, Y. (2020). Accounting Guidelines Implementation: A Study on Economic Development of Islamic Boarding Schools. *Journal of Asian Multicultural Research for Economy and Management Study*, 1(2), 54-60.

- Rahman, N. A., Deni, M. I. M., & Kharuddin, K. ' . M. (2024). Islamic accounting principles education for alpha generation: a conceptual paper. *International Journal of Modern Education*, 6(21), 277–288.
- Septyan, K., Triyuwono, I., Rosidi, R., Mulawarman, A., & Setiawan, A. (2022). Islamic household accounting: romance discussion in accounting curriculum. *Journal of Islamic accounting principles and Finance Research*, 4(2), 209-238.
- Tunde, O., Enofe, A., & Adekunle, E. S. (2023). Recent development in accounting education and accounting practice. *Cognizance Journal of Multidisciplinary Studies*, 3(9), 107–125.
- Wahyuni-TD, I. S., Fernando, Y., Hasnita, E., & Hasnita, E. (2018). Role of Islamic ethics towards ethucal accounting practice. *Journal of Governance and Integrity*, 2(1), 23–27.
- Zaky,A. & Warsono, S. (2023). Understanding Islamic accounting principles: a Quranic approach. *Journal of Islamic accounting principles and Business Research*, Vol. 14 No. 7, pp. 1048-1064.

VALIDITY AND RELIABILITY OF ISLAMIC PSYCHOSPIRITUAL SELF-CARE MODULE TO ENHANCE WELL-BEING AMONGST UNDERGRADUATES

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Abstract

Despite progress on a global scale, the overall state of well-being has experienced a decline. The Covid-19 pandemic has exacerbated mental health challenges, particularly among university undergraduates. Research suggests that self-care practices can serve as a preventive measure against mental health symptoms, particularly when viewed through Islamic paradigms, fundamentally grounded in the doctrines of the Al Quran and Sunnah, that underscore the importance of prevention and resilience. Nonetheless, the concept of self-care as an Islamic intervention remains underdeveloped, highlighting a significant gap in research on Islamic psychospiritual methodologies. Therefore, this research aims to evaluate an Islamic Psychospiritual Self-care Module (iPScM) targeted at university undergraduates to bolster resilience and coping mechanisms, thereby contributing to enhanced well-being and societal advancement. A validity assessment was conducted, incorporating evaluations from experts in counselling, psychology, and Islamic psychology. The findings indicate that the iPScM module and its respective content are acceptable and suitable for the intended demographic. A reliability assessment involving thirty first-year students at a local Islamic public university yielded a high overall reliability coefficient, with a Cronbach Alpha of .894. Respondents' feedback concerning the module was positive. This indispensable Islamic-centred self-care approach possesses significant potential to cultivate self-resilience as well to mitigate and prevent a range of emotional and psychological challenges, including depression, anxiety, and stress, among undergraduates. Hence, this will enable them to focus on academic success and personal growth for their future contribution to societal and national advancement.

Keywords: *Islamic counselling, islamic psychology, psychospirituality, self-care, module, well-being, mental issues.*

INTRODUCTION

Despite global technological progress and improved living standards, mental health has significantly declined due to various factors. Factors such as increased software employment, occupational stress, and economic pressures have negatively impacted mental health and overall well-being (Hariharan & Kapoor, 2020). The Covid-19

pandemic has exacerbated this issue, leading to increased attention on mental health disorders (Masruri et al., 2022; Mustapha et al., 2023; Thomas & Barbato, 2020; Wong et al., 2023). Tahir (2020) contends that the prevalence of materialism, consumerism, and social media, alongside perceived threats from technological advancements, has fostered disconnection, dissatisfaction, existential crises, and increased mental health issues. Arguably, the declining influence of religion and morality as protective mechanisms has led to greater fear, insecurity, and a rise in psychological disorders, aggravated by Western cultural influences (Saper, Daud, & Ahmad, 2016). In a similar vein, Hassan (2021) asserts that challenges in societies arise from a superficial understanding of Islam, resulting in a limited application of Islamic principles in Muslim communities.

STATEMENT OF THE PROBLEM

University undergraduates are essential for national progress; however, rising stress, anxiety, and depression levels among them negatively affect their well-being and academic outcomes (Bahiroh & Madjid, 2022; Zhang, Litson, & Feldon, 2022). This issue correlates with increased college dropout rates and impedes students' emotional and social growth (The et al., 2015). Depression not only induces emotional distress but also heightens the risk of suicidal thoughts (Dein et al., 2010; Hunt & Eisenberg, 2010). Therefore, there is a critical need for effective interventions to address this crisis and lessen its impact (Amanvermez et al., 2020; Baetens et al., 2022; Luttenbacher, Breukel, & Adamson, 2021). In fact, McGorry and Mei (2018) highlight that 75% of mental health disorders manifest before age 25, with significant barriers faced by youth aged 12 to 25 in accessing mental health care.

Beames et al. (2021) indicate that timely execution of prevention and early detection programs yields positive outcomes. Nonetheless, there remains ambiguity regarding the essential elements of these interventions. Tackling mental health challenges in university students necessitates the development or refinement of youth mental healthcare models that integrate preventive and early intervention strategies (Colizzi, Lasalvia, & Ruggeri, 2020; Rith-Najarian, Boustani, & Chorpita, 2019; Shamsuddin, Yusof, & Sukor, 2022; Singh, Kumar, & Gupta, 2022). These models ought to surpass rudimentary preventive approaches by equipping students with coping mechanisms, resilience, and psychological resources essential for navigating university life and subsequent endeavours. Nevertheless, global efforts to implement effective mental health services have been limited, primarily due to an overwhelming focus on physical health.

Nonetheless, research indicates that self-care is effective in preventing mental health symptoms (Shamsuddin et al., 2022), supported by the National Institute of Mental Health and The Society for the Advancement of Psychotherapy. It enables individuals to cultivate coping mechanisms for the complexities of the modern VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) environment. Furthermore, the BANI (Brittle, Anxious, Nonlinear, Incomprehensible) framework post-Covid-19 emphasizes the necessity of self-care and coping strategies for enhancing emotional

resilience. The World Health Organization advocates self-care interventions to address increasing mental health challenges and healthcare expenditures (WHO, 2022).

Islamic psychology and counselling prioritize self-care, emphasizing holistic mental well-being over mere treatment of mental health issues. In fact, Islamic mental health perspectives incorporate preventive strategies and advocate for societal transformation through "Amr bil Maruf Nahi Munkar," enjoining good, forbidding evil (Idris, 2023). However, the exploration of self-care as an Islamic intervention remains underdeveloped (Shamsuddin et al., 2022), potentially due to the view of self-care as an individual endeavour (Ghanbari & Bahadorimonfared, 2020). Consequently, Marzband and Zakavi (2017) identify a deficiency in scholarly literature from Islamic perspectives on self-care, highlighting a critical research gap for further investigation into Islamic psychospiritual practices. Hence, this study aims to assess the effectiveness of an Islamic psychospiritual self-care module for university students, fostering resilience and effective coping mechanisms to improve their mental, psychological, and spiritual well-being, while promoting contributions to societal and national development.

Consequently, several research questions are formulated, including: What is the validity coefficient value of the module? What are the validity coefficient values of the sub-modules? What is the overall reliability coefficient value for the module? And what are the reliability coefficient values for the sub-modules?

ISLAMIC PSYCHOSPIRITUAL SELF-CARE MODULE (iPScM)

A module comprises a structured series of autonomous learning units aimed at fulfilling specified objectives (Noah & Ahmad, 2005). The Islamic Psychospiritual Self-Care Module (iPScM) exemplifies psychoeducation grounded in Russell's Module development Model (Russell, 1974). It empowers undergraduate students with coping strategies for mental health issues, including depression, anxiety, and stress, while promoting their psychospiritual well-being through Islamic psychospiritual self-care practices. The strategy's primary aim is to enhance psychospiritual attributes such as God-centeredness, the Hereafter-focused, altruism, and personal reformation.

This improvement in psychological and spiritual well-being fosters resilience to the challenges faced during undergraduate studies and the transition to adulthood; preparing them as future parents and leaders. Islamic psychospiritual self-care is crucial for both preventative measures and coping strategies, as it harmonizes emotional, mental, physical, and spiritual development while improving treatment adherence and efficacy (Ekhtiari et al., 2017).

The iPScM Module underpins al-Ghazali's Theory of the Soul (Al-Ghazali, 2015), focusing on the purification of the soul, "tazkiyatun an-nafs"; through cleansing spiritual ailments within oneself via "muhajadah al-nafs", which involves abandoning evil from the heart, "Takhalli", and cultivating spirituality and good character, "tahalli" (Hamjah, 2016). This approach fosters a serene soul by improving various aspects of well-being, ultimately drawing individuals closer to Allah SWT and

promoting a life of peace in alignment with Al-Quran and Prophetic teachings, rather than relying on secular Western solutions (Hassan, 2020).

Consequently, it is essential to meticulously adhere to module development protocols and conduct comprehensive validity and reliability assessments to ensure the development of effective modules. In this study, the researcher utilized Russell's development framework, which provides a thorough process for selecting pertinent modules, deemed the most advantageous. Russell advocates for the flexibility and modularization of existing resources, prompting the researcher to modify a pre-existing module through a careful selection process. A pilot study was executed to assess the iPScM module's effectiveness in fulfilling the research goals. Upon concluding the effectiveness assessment, the module is prepared for implementation. The subsequent diagram in Figure 1 illustrates the development process of the iPScM module according to Russell's module development model (Russell, 1974).

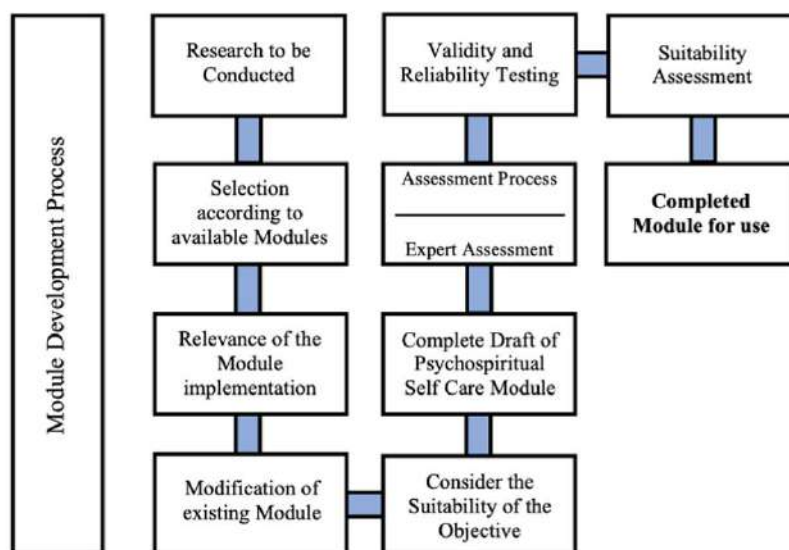


Figure 1: The module development process model for the Islamic Psychospiritual Self-Care Module

(Source adaptation of Russell Module Development Model: James D. Russell, 1974)

METHODOLOGY

This research employs a quantitative quasi-experimental design with repeated measures to assess the validity and reliability of a draft module for first-year undergraduates at the Islamic Science University of Malaysia (USIM). The objective is to derive validity values through expert questionnaires and reliability values via written responses from the sample group.

Dimopoulos and Prantis (2013), as referenced in Darusalam and Hussin (2021), stipulate the necessity of at least three experts in relevant fields for content validation. For this study, three experts in counselling, psychology, and Islamic tassawuf were selected to appraise the construct validity and module content. This included scholars

from public universities, such as an Emeritus Professor in Counselling, an Associate Professor in Islamic psychospirituality or “tassawuf”, and a counselling psychology professional. The expert panel's profiles are outlined in Table 1:

Name	Position and Qualification (Lecturer/Doctor of Philosophy/Department)	Expertise	
Expert 1	Universiti Sultan Abd Halim Mu'adzam Shah International Islamic Universiti (UniSHAMS), Kuala Ketil, Kedah	Prof. Emeritus Malaysian Board of Counsellors (LKM)	Counselling
Expert 2	Program of Dakwah & Islamic Management, Faculty of Leadership & Management, Universiti Sains Islam Malaysia (USIM), Nilai, Negri Sembilan	Associate Prof. USIM	Islamic Dakwah & Tassawuf
Expert 3	Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu (UMT), Kuala Nerus, Terengganu	Senior Lecturer, Universiti Malaysia Terengganu	Counselling Psychology

Table 1: Content Validity Experts for IPSCM Module

RESULTS

The Validity Of iPScM

The validity assessment for this research module involves two methodologies: i) face validity, and ii) content validity. Mahmud et al., (2022) asserts that content validity pertains to the module's capacity to accurately measure both its instrument and relevant content. While, Arip (2018) indicates that content validity can be validated by achieving a 70% threshold or above, reflecting robust validity. A score falling below 70% signifies insufficient content validity. The content validity of the questionnaire is evaluated using the formula depicted in Figure 2, as suggested by Noah and Ahmad (2005).

$$\frac{\text{Total Experts' Scores (X)}}{\text{Total Overall Scores}} \times 100\% = \% \text{ Module Content Validity}$$

Figure 2: Formula to determine Content Validity (Source: Sidek & Jamaluddin, 2005)

The content validity of this module has been assessed by three experts who evaluated material suitability, including language and sentence structure (Darusalem and Hussin, 2021). The evaluation utilized a Likert scale survey adapted from Russell (1974), ranging from one to ten, from strongly disagree to strongly agree. Successful module validity encompasses five criteria: i) meeting target demographic, ii) smooth execution, iii) timeframe adherence, iv) change-inducing potential through the four constructs used, and v) empowerment for psychospiritual well-being. Meeting these criteria signifies module success and goal attainment.

For the content validity questionnaire, each sub-construct and activity follows a format established by Arip (2018). The questionnaire assesses module suitability concerning the sub-constructs: i) God-centredness, ii) the-Hereafter-focused, iii) Care for others, and iv) Reformation. These sub-constructs are systematically linked to their corresponding activities. A semantic scale from zero (strongly disagree) to ten (strongly agree) is utilized. The resulting data underwent descriptive analysis to quantify expert consensus. The benchmark for acceptable content validity is 70%, as stated by Noah and Ahmad (2005), Arip (2018), Mahmud (2017). Data analysis focused on deriving expert agreement percentages, with a minimum acceptable content validity threshold of 70% or higher, according to Shah (2018) and designated to evaluate the module's content validity utilize a questionnaire developed by Arip (2018), based on Russell (1974). The experts' evaluations, as delineated in Table 2, revealed a minimum percentage of 93%, indicating significant suitability for application. The content items achieved a maximum percentage of 96%, demonstrating the module's capability to assess Islamic psychospiritual well-being through the four sub-constructs (Mahmud, 2017).

The findings of the study indicated an overall score of 94.8% with a content validity coefficient of $.948 > .70$, affirming high content validity. An evaluation of sub-constructs and activities was performed using an adapted questionnaire by Arip (2018). Table 3.8 illustrates that the overall content validity of the sub-constructs and activities is 94.5%, with a content validity coefficient of 0.945, surpassing the acceptable threshold of $.70$. In summary, the content validity for the sub-constructs and activities is deemed good and acceptable.

The findings of the module validity assessment carried out by the appointed experts are examined in accordance with Russell's module content validity questionnaire (Russell, 1974), which has been adapted to assess the content quality of the iPScM module. Consequently, the validity values for the comprehensive content of the iPScM module are presented in the following Table 2:

iPScM module Features	Percentage	Expert Evaluation
1. The contents of iPScM meet the target demographic	93	Acceptable
2. The contents of iPScM can be implemented smoothly	96	Acceptable

3.	The contents of iPScM adhere to the timeframe	93	Acceptable
4.	The content of iPScM has potential for change-inducing through the four sub-constructs	96	Acceptable
5.	The contents of iPScM can empower individuals for psychospiritual well-being	96	Acceptable

Table 2: Content Validity Value Based on Expert Evaluation

Table 2 illustrates that the minimum percentage value is 93% for the module content aligning with the target demographic and adhering to the designated timeframe. Conversely, the maximum percentage is 96% for module content that can be executed smoothly, possesses the capacity to foster reformative change, and enhances individuals' psychospiritual well-being. Overall, the results indicate that the content of the iPScM module is both commendable and suitable for the designated target audience.

The findings pertaining to the expert validity values based on the sessions and activities are presented in the following Table 3:

Main Module	iPScM Sub-Module/Session	Percentage	Expert Evaluation
Part A: Introduction	Session 1: Getting-to-know and Building Group Rapport	93	Accepted
	Session 2: Introduction on Islamic Theory of the Soul and the Purpose of Creation	96	Accepted
Part B Dimension 1: God-centredness	Session 3: Gratitude/Thinking	93	Accepted
	Session 4: Spirituality/Increase	93	Accepted
	Session 5: Aakhirah-focused/Supply	95	Accepted
Dimension 2: Aakhirah-focused	Session 6: Picturizing/Receiving	96	Accepted
	Session 7: Contribution/Prosperity	96	Accepted
Dimension 3: Care for others	Session 8: Communication/Forgiveness	96	Accepted

Dimension 4: Reformation	Session 9: Positivity/Allowing	93	Accepted
	Session 10: Action/Sacrifice	93	Accepted
	Session 11: Education/Success	96	Accepted
Overall		94.5	

Table 3: Expert Validity Value based on iPScM Module Sessions and Activities

Based on Table 3, the overall percentage of iPSCM module sessions and activities surpasses 90% for each session and activity. The minimum percentage of 93% pertains to the activities of building group rapport, gratitude/thinking, spirituality/increase, positivity/allowing, and action/selflessness. Conversely, the maximum percentage of 96% pertains to the module introduction on Islamic theory of the soul and the purpose for creation, contribution/prosperity, communication/forgiveness, and education/success. This indicates that the level of validity of the iPScM module is reliable. Overall, based on the feedback from the content experts on the sub-constructs of the module, it is evident that the iPScM module fulfills the specified objectives.

The Reliability Of iPScM

The assessment of module reliability is essential for ascertaining expert approval (Russell 1974). A reliability coefficient of $\alpha = 0.7$ or higher indicates module appropriateness for the intended respondents. Module reliability evaluation depends on participant comprehension of the content (Russell, 1974). Creswell and Creswell (2018) posits that module reliability assessment parallels that of questionnaires or instruments. The calculation approach is analogous, as both tools serve distinct purposes. A pilot study is executed on the module, utilizing a sample selection method that mirrors the actual research, focusing on participants with homogeneous characteristics (Noah & Ahmad, 2005).

The reliability questionnaire's item construction aligns with the module's identified objectives for each activity (Ahmad, 2002). Five objectives from the 13 activities guide the development across five sub-constructs within the module. A 10-point Likert scale is employed for the agreement scale, ranging from 0 (strongly disagree) to 10 (strongly agree), as recommended by (Arip, 2018). Data collection and descriptive analysis show a significant overall agreement of 89.45%.

Subsequently, a pilot study conducted on first-year university undergraduates at USIM, Nilai campus exhibited homogeneity with the actual research population. Hertzog (2008) advocates for a sample size of 25 to 48 for experimental design studies. Therefore, the researcher selected 30 participants who completed the Islamic Psychospiritual Self-Care Module, consisting of 9 sessions over 13.5 hours across 2 days. Following the programme, respondents filled out a reliability questionnaire for

the module. The reliability analysis employed a minimum Cronbach's Alpha coefficient of 0.70, as per Fraenkel, Wallen, and Hyn (2012). Thus, the reliability coefficient for the module was $\alpha = 0.894$ (89.45%), affirming its effectiveness and suitability for the actual research.

The results of reliability evaluation predicated on iPScM module sessions and activities is conducted on respondents utilizing Cronbach's alpha analysis as follows:

Module	α Value
Islamic Psychospiritual Self-Care Module (iPScM)	.894

Table 4: Overall iPScM Module Reliability Value

Main Module	iPScM Sub-Module/Session	α Value
Part A: Introduction	Session 1: Getting-to-know and Building Group Rapport	.884
	Session 2: Introductory Module on Islamic Theory and Purpose of Creation	.825
Part B Dimension 1: God-centredness	Session 3: Gratitude/Thinking	.848
	Session 4: Spirituality/ Increase	
Dimension 2: Aakhirah-focused	Session 5: Aakhirah-focused /Supply	.952
	Session 6: Picturizing/Receiving	
Dimension 3: Care for Others	Session 7: Contribution/Prosperity	.914
	Session 8: Communication/Forgiveness	
Dimension 4: Reformation	Session 9: Positivity/Allowing	.914
	Session 10: Action/Selflessness	
	Session 11: Education/Success	

Table 5: Reliability Value of iPScM Module Sessions and Activities

According to the iPScM pilot study, the overall reliability coefficient is significantly above the .70 threshold, recorded at .894. The maximum alpha coefficient is .952 for contribution/prosperity and communication/forgiveness, while the minimum alpha coefficient is .825 for gratitude/thinking and spirituality/increase sub-constructs. The results indicate that the iPScM module can be regarded as valid and reliable, and may be employed in interventions aimed at enhancing psychospiritual well-being.

DISCUSSION

This research aims to evaluate the effectiveness of an Islamic psychospiritual self-care module (iPScM) in enhancing the psychological and spiritual well-being among university undergraduate students. The application of a self-care methodology is imperative given the surging and rapid prevalence of mental health issues, necessitating a preventive and proactive strategy through psychoeducational programmes. The iPScM module is conceived through a modification procedure by integrating and Islamicizing the module content to incorporate Islamic doctrines from the Al Quran and the teachings of the Prophet SAW into the original personal excellence curriculum. The Russell Module Development Model (Russell, 1974), which facilitates the transformation of existing materials into a modular structure, is employed as the underpinning for integrating the original personal excellence curriculum into an Islamic psychospiritual self-care module to enhance the well-being of undergraduates who are young adults contending with the prevailing mental health adversities.

Rooted in Imam al-Ghazali's Theory of the Soul (Al-Ghazali, 2015), this methodology establishes a structured framework for the purification, refinement, and disciplining of the human soul, aiming to achieve contentment and well-being in both this worldly life and the Hereafter. Both the American Psychological Association (APA) and the American Counseling Association have underscored the significance of recognizing and accepting religion as an essential aspect of counseling and psychotherapy. In fact, the Bryant (2024) recognizes religion as a pivotal factor influencing the functionality of human existence and has categorized religion in the 36th division of psychology.

The iPScM module is considered to be suitable and accurate for use in assessing the effectiveness of the module on the university undergraduate sample demographic. The module development conforms to the stages proposed by Russell (1974) and Noah and Ahmad (2005), encompassing the stage of draft preparation, the trial or pilot stage, and the module assessment stage to ascertain its effectiveness. Furthermore, a commendable module is also delineated by its capacity to evaluate three principal dimensions, namely the content validity, reliability, and effectiveness of the module (Noah & Ahmad, 2005). These dimensions facilitate the module's deployment with confidence and certainty, given its substantiated effectiveness and credibility. The content validity of this module has been established to be high and acceptable through expert evaluation of sub-modules and activities; validated by module content experts

who are authorities in their respective domains. Furthermore, the module's reliability has been confirmed to be both high and acceptable. These results align with previous studies carried out by Mahmud et al. (2022), Yurayat and Seechaliao (2021), and Saper et al. (2016) that implemented comparable content validation methodologies as those employed in the present research.

Simultaneously, a pilot study has been executed on the IPSCM module utilizing a sample that exhibits homogeneous characteristics with the actual population. The outcomes of this study have unveiled a significant degree of reliability throughout the module, sub-module, and activity. These findings correspond with prior research conducted by Rahman et al. (2021), Awang and Jais (2020), Saper et al. (2016), Mahmud (2017) which also demonstrated a high degree of reliability, thereby suggesting the efficacy of the module and its appropriateness for application in an actual study.

CONCLUSION

Consequently, the iPscM module serves as a psychoeducational approach for early intervention and resilience-building in undergraduates, thus enhancing their psychospiritual well-being. This Islamic-centered self-care approach, rooted in the doctrines of Al Quran and Sunnah, significantly aids in alleviating emotional and psychological issues like depression, anxiety, and stress.

Moreover, this research provides opportunities for future researchers to explore aspects of development and personal growth of undergraduates. The Islamic psychospiritual Self-Care Module exhibits high validity and reliability, underscoring its effectiveness in enhancing psychospiritual well-being. This research corroborates previous studies suggesting that counselling focused on the psychospiritual well-being of university students can facilitate positive changes, enabling them to concentrate on academic success and personal growth. Ultimately, such initiatives equip students with vital leadership capabilities for their professional pursuits, fostering national advancement.

REFERENCE

Book

- Al-Ghazali, M. M. 2015. *Essential Ihya' 'Ulūm al-Dīn - The Revival of the Religious Sciences* (F. Karim, Trans. Vol. 3). Petaling Jaya: Islamic Book Trust (IBT).
- Arip, M. A. S. M. 2018. *Pembinaan dan pengujian modul*. Selangor: I Psychology and Counselling Academy.
- Creswell, J. W., & Creswell, J. D. 2018. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Thousand Oaks: SAGE Publications Inc.

- Darusalam, G., & Hussin, S. 2021. *Metodologi Penyelidikan Dalam Pendidikan: Amalan dan Analisis Kajian* (4th ed.). Kuala Lumpur: Penerbit Universiti Malaya.
- Fraenkel, J. R., Wallen, N. E., & Hyn, H. H. 2012. *How to Design and Evaluate Research in Education* (8th ed.). New York: Mc Graw Hill.
- Hamjah, S. H. 2016. *Pendekatan Kaunseling Spiritual Menurut Al-Ghazali*. Kuala Lumpur: Dewan Bahasa & Pustaka.
- Noah, S. M., & Ahmad, J. 2005. *Pembinaan Modul Bagaimana Membina Modul Latihan dan Modul Akademik*. Serdang: Penerbit Universiti Putra Malaysia.
- Russell, J. D. 1974. *Modular Instruction*. Minneapolis: Burgess Publishing Company.
- WHO, W. H. O. 2022. *WHO guideline on self-care interventions for health and well-being, 2022 revision: web annex B: GRADE tables*. Geneva: World Health Organization.

Journal

- Amanvermez, Y., Rahmadiana, M., Karyotaki, E., de Wit, L., Ebert, D. D., Kessler, R. C., & Cuijpers, P. (2020). Stress management interventions for college students: A systematic review and meta-analysis. *Clinical Psychology: Science and Practice*, 30(4), 423-444.
- Awang, S., & Jais, S. M. (2020). Reliability of the Tazkiyatun NAFS Module. *International Journal of Academic Research in Business and Social Sciences*, 10(2), 69–82.
- Baetens, I., Vanderfaeillie, J., Soyez, V., Vantilborgh, T., Meersschaut, J. V. D., Schotte, C., & Theuns, P. (2022). Subjective wellbeing and psychological symptoms of university students during the COVID-19 pandemic: Results of a structured telephone interview in a large sample of university students. *Front. Psychol*, 13, 889503.
- Bahiroh, S., & Madjid, A. (2022). Group Guidance Model to Improve Students' Resilience in the Covid-19 Era. *Jurnal Basicedu*, 6(3), 5435–5446.
- Beames, J. R., Kikas, K., O'Grady-Lee, M., Gale, N., Werner-Seidler, A., Boydell, K. M., & Hudson, J. L. (2021). A New Normal: Integrating Lived Experience Into Scientific Data Syntheses. *Front Psychiatry*, 12, 763005.
- Colizzi, M., Lasalvia, A., & Ruggeri, M. (2020). Prevention and early intervention in youth mental health: is it time for a multidisciplinary and trans-diagnostic model for care? *International Journal of Mental Health Systems*, 14(1), 23.
- Dein, S., Cook, C. C. H., Powell, A., & Eagger, S. (2010). Religion, spirituality and mental health. *The Psychiatrist*, 34(2), 63-64.

- Ghanbari, S., & Bahadorimonfared, A. (2020). Self-care from the Perspective of Islam. *Journal of Pizhuhish dar dīn va salāmat*, 6(2), 1-6.
- Hariharan, K., & Kapoor, R. (2020). Impact of practicing spirituality on psychological well-being. *Indian Journal of Positive Psychology*, 11(3), 252-257.
- Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Res Nurs Health*, 31(2), 180-191.
- Hunt, J., & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *J Adolesc Health*, 46(1), 3-10.
- Luttenbacher, I., Breukel, J. S., & Adamson, M. M. (2021). The Mediating Role of Rumination in the Relationship between Loneliness and Depression in University Students during the COVID-19 Pandemic. *COVID*, 1(2), 447-457.
- Mahmud, M. I., Sawai, J. P., Sawai, R. P., Mahazir, M., & Sharif, S. (2022). Content Validity of the Islamic Emotional Regulation Module. *International Journal of Academic Research in Business and Social Sciences*, 12(1), 1968–1978.
- Marzband, R., & Zakavi, A. A. (2017). A Concept Analysis of Self-Care Based on Islamic Sources. *International Journal of Nursing Knowledge*, 28(3), 153-158.
- Masruri, M., Borham, A. S., Rahim, M. H. A., Chakim, S., & Faiz, M. (2022). The Approach of Revelation of the Quran and al-Sunnah to Dealing with Soul and Mental Disorders After the COVID-19 Outbreak. *International Journal of Academic Research in Business and Social Sciences*, 12(8), 605-617.
- McGorry, P. D., & Mei, C. (2018). Early intervention in youth mental health: progress and future directions. *Evidence Based Mental Health*, 21(4), 182-184. doi:10.1136/ebmental-2018-300060
- Mustapha, R., Paris, T. N. S. T., Mahmud, M., Musa, M. S., Zaini, A. A., & Zakaria, J. (2023). Managing students' mental health: The use of NGT and FDM to generate a concrete solution. *International Journal of Asian Social Science*, 11(2), 89-100.
- Rahman, M. A. A., Ghani, F. A., Mustapha, R., Suparman, S. L. H. H., Sajat, N. M., & Bohari, N. M. (2021). Validity and Reliability of Modul Islah in Managing Students at Risk. *Psychology And Education Journal*, 58(2), 8671-8679.
- Rith-Najarian, L. R., Boustani, M. M., & Chorpita, B. F. (2019). A systematic review of prevention programs targeting depression, anxiety, and stress in university students. *Journal of Affective Disorders*, 257, 568-584.
- Saper, M. N., Daud, N. A. M., & Ahmad, N. (2016). Kesahan dan Kebolehpercayaan Modul I-Sc (Islamic Spiritual Counseling) ke atas Pelajar Bermasalah Tingkah Laku. *International Journal of Islamic Thought*, 9, 32-43.
- Singh, V., Kumar, A., & Gupta, S. (2022). Mental Health Prevention and Promotion-A Narrative Review. *Front Psychiatry*, 13, 898009.

- Teh, C. K., Ngo, C. W., Zulkifli, R. A., Vellasamy, R., & Suresh, K. (2015). Depression, Anxiety and Stress among Undergraduate Students: A Cross Sectional Study. *Open Journal of Epidemiology*, 5(4), 260-268.
- Thomas, J., & Barbato, M. (2020). Positive Religious Coping and Mental Health among Christians and Muslims in Response to the COVID-19 Pandemic. *Religions*, 11(10), 498.
- Wong, S. S., Wong, C. C., Ng, K. W., Bostanudin, M. F., & Tan, S. F. (2023). Depression, anxiety, and stress among university students in Selangor, Malaysia during COVID-19 pandemics and their associated factors. *PLoS One*, 18(1), e0280680.
- Yurayat, P., & Seechaliao, T. (2021). Effectiveness of Online Positive Psychology Intervention on Psychological Well-Being Among Undergraduate Students. *Journal of Education and Learning*, 10(4), 143-155.
- Zhang, F., Litson, K., & Feldon, D. F. (2022). Social predictors of doctoral student mental health and well-being. *PLoS One*, 17(9), e0274273.

Book Section

- Ekhtiari, H., Rezapour, T., Aupperle, R. L., & Paulus, M. P. (2017). Neuroscience-informed psychoeducation for addiction medicine: A neurocognitive perspective. In T. Calvey & W. M. U. Daniels (Eds.), *Progress in Brain Research* (Vol. 235, pp. 239-264): Elsevier.

Conference Papers

- Hassan, M. K. (2020, 12 November). *Psychological Disorders and the Spiritual Perspective of the Qur'an and the Sunnah*. Paper presented at the The Symposium on Psychological Disabilities Organised by Counselling Centre, International Islamic University Malaysia.
- Shamsuddin, F., Yusof, S. N. M., & Sukor, N. M. (2022). *Islamic Psychospiritual Self-Care as a Counselling Intervention to Enhance Well-Being of Mental Health Clients A Conceptual Paper*. Paper presented at the E-Proceeding SAIS 2022 Seminar Antarabangsa Islam dan Sains 2022, USIM, Negeri Sembilan.

Internet

- Bryant, T. (2024). *The Psychology of Religion and Spirituality*. https://youtu.be/Q_kEoNXMSos
- Hassan, M. K. (2021). *The Spiritual Core of the Insan Sejahtera Personality*. <https://www.iium.edu.my/media/71489/THE%20SPIRITUAL%20CORE%20OF%20THE%20INSAN%20SEJAHTERA%20PERSONALITY.pdf>

Idris, K. A. (2023). *Integrating Islamic Spirituality in Mental Health Treatment*. <https://www.ikim.gov.my/new-wp/index.php/2023/01/31/integrating-islamic-spirituality-in-mental-health-treatment/>

Tahir, R. (2020). *In Hardship and in Ease: How to Rely on God* <https://yaqeeninstitute.org/read/post/how-to-rely-on-god>

Thesis

Ahmad, J. (2002). *Validity, reliability and effectiveness of self-development program modules on achievement motivation among Selangor secondary school students*. (Doctor of Philosophy). Universiti Putra Malaysia, Serdang.

Mahmud, M. I. (2017). *Kesan program kerjaya psiko-pendidikan Cognitive Information Processing terhadap ketidakfungsian pemikiran kerjaya dan efikasi sendiri kerjaya pelajar di sebuah universiti awam*. (Doctor of Philosophy). Universiti Putra Malaysia, Serdang.

FACTORS AFFECTING THE POVERTY LEVEL IN DEVELOPED AND DEVELOPING COUNTRIES

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Abstract

The high rate of poverty shows that government development initiatives, especially those aimed at reducing it, have not been successful. Poverty is influenced by many physiological aspects, but different nations respond to poverty in different ways. The aimed of this study is to determine the effect of unemployment, population, gross domestic product (GDP), government spending and income per capita on poverty rate of 6 countries categorized as developed and developing countries. This study used panel data regression model from year 2010-2019 by using Statistics and data (STATA) to generate the result for each analysis. Based on the results obtained, we found that the unemployment, GDP and income per capita are significant to poverty rate in developing countries, while for developed countries unemployment, government spending and income per capita are significant towards poverty rate. The finding is beneficial to investors to predict their poverty rate research and for country to main resilient and against any financial circumstance.

Keywords: *Poverty rate, unemployment, population, GDP, government spending, income per capita*

INTRODUCTION

Country's development is a process that aims to bring prosperity to society through economic development. For developed and developing countries, the benchmarks for the success of country's development can be seen from the economic growth, economic structure, and inequality between populations, regions, and sectors (Asrol and Ahmad ,2018). The main objective of economic development is to create the maximum growth and reduce poverty, income inequality, and unemployment. According to United Nations, the developed country is one that has a high industrial and human development index compared to other countries. Along with having a highly developed economy, it also needs a technologically advanced infrastructure. Meanwhile, developing country is one that has a low standard of life, a lack of industrial development, and a moderate to low Human Development Index (HDI). Poverty is a rising issue influenced by various factors including number of populations, economic growth, unemployment, government spending and Income per capita. This issue has not been resolved optimally due to various and complex causes of poverty.

As stated by United Nations, it has been observed that poverty has increased in developed countries, particularly in Europe. Over 300 million people were predicted to be living in poverty in industrialized nations in 2012 by the International Labor Organization. This increase is related to the large influx of migrants into Europe in recent years. The effects of poverty are greatest on women and children. More than half of all children under 15 live in extreme or moderate poverty in emerging and developing nations. 36 percent of children worldwide live in wealthy nations below the relative poverty level (United Nations).

According to American Psychological Association, there are other factors that affect poverty level such as population, economic growth, government spending and income per capita. In developed and developing countries, poverty has been a major focus of research in the past study. Despite decades of improving economic development, poverty remain a formidable challenge to the government and international community. This indirectly has induced a severe long-term impacts on the economy, including high rates of youth unemployment globally.

Therefore, the aim of this study is to measure the relationship between unemployment, population, economic growth, government spending, income per capita and poverty rate in developed and developing countries by using panel data regression analysis. The data consist of 6 developing countries and 6 developed countries from year 2010 until 2019. All the data from the world bank and Our World in Data. The finding of this study may benefit researchers especially people in developed and developing countries to analyze the factors effecting the poverty level in developing countries. Even though there still have limitations and problems in this study, but it may be useful for others and may inspire deeper insights research on this topic.

Research on the relationship between unemployment and poverty in Indonesian countries has been conducted and examined by Feriyanto et al (2020). Using panel data regression, the analysis revealed that the unemployment had a significant and negatively relationship with poverty rate. The study by Muhammad and David (2015) also concluded that even though Nigeria was ranked 158th on the list of the most developed countries in the world, unemployment was a major contributor to poverty in the country because of Nigeria had a relatively high standard of living. The same case is also examined by Oriaifoh and Omagbon (2016) in Nigeria. According to research, Nigeria is the strongest economic country in Africa. Eventhough Nigeria's economy is expanding rapidly, many issues remain unsolved, including high unemployment, inequalities in income, and poverty.

The other study Asymmetric impact of inflation and unemployment on poverty in Pakistan was conducted by Meo et al (2018) in Pakistan. The ARDL method was utilised in this research study, and data were collected from each of Pakistan's states. The findings of the research indicate that there is a significant relationship between unemployment, inflation, and the reduction of poverty. The high unemployment rate contributes to a significant income disparity between individuals, which in turn results in significant socioeconomic inequality.

Research on the relationship between population and poverty in Uganda countries has been examined by Klasen et al (2013). Using panel data regression, the analysis revealed that the population had a insignificant and negatively relationship towards poverty rate. Meanwhile, according to Ukpong (2013) population growth has a positive and significance on poverty in Nigeria by using Ordinary Least Square (OLS). This can be supported by Asrol and Ahmad (2018) discovered that population has a positively significant effect poverty in Indonesia and Bengkulu, respectively. Both studies use multiple regression analysis. These studies stated that increasing in large numbers of people living in an area, along with a high level of education and other available human resources, can lead to increased levels of labour productivity, which can help lower levels of poverty. Hence, from these five finding studies, the major result which is the population significant effect to poverty.

The relationship between poverty and economic growth has been examined by many studies. For example, Agrawal (2015) stated in his study, economic growth has a negative and significant effect on poverty by using econometric regression analysis in Kazakhstan. Economic growth helped reduce poverty by increasing employment and higher real wages. However, Feriyanto (2020) stated that economic growth had negative and significant to poverty in urban and rural area in Indonesia. Thus, it can be concluded that this study is expected to get negative and insignificant effect between economic growth and poverty based on major finding from these six journals.

Some previous study assess relationship between poverty and government spending such as Anderson et al. (2018) with Meta-regression Analysis method to measure relationship between government spending and income poverty with focus on low and middle countries. The result indicated that government spending negatively significant effect to poverty. The study from Yusri (2020) with Synthetic Control Method (SCM) method in Aceh, Indonesia also identified government spending negative and statistically significant to poverty.

Furthermore, Mehmood and Sadiq (2010) found that government spending negative and insignificant effect to poverty. This study using ECM model Johnson Cointegration model. The study also supported by Alamanda (2020) indicate that the government spending has a negative correlation not significant effect to poverty. These studies use panel data to measure different types of government spending effect to poverty in Indonesia and time series data to measure the impact government spending on poverty reduction in Pakistan, respectively. Another study by Asrul and Ahmad (2018) stated a negative and insignificant relationship between government spending and poverty by using multiple regression Analysis in Indonesia. Thus, it can be summarized that this study is expected to get negative and insignificant effect between government spending and poverty based on major finding from these journals.

Many researchers had examined the relationship between poverty and income per capita as proof like Islam et al. (2017) stated that income per capita has positive and significant effect to poverty by using Ordinary Least Square (OLS) method in

Rokan Hulu Regency, Indonesia, and Pakistan, respectively. Meanwhile, the study by Araujo et al (2017) which is to measure income concentration effects on poverty in Brazil identified a result negatively significant. This can be supported by Park and Mercado (2015) and Tombolotutu (2018) indicate income per capita negative and significant by using the Generalized Method of Moments (GMM) and panel data analysis, respectively. Hence, it can be concluded that this study is expected to get negative and significant effect between income per capita and poverty based on major finding from these five previous studies.

METHODOLOGY

The dataset in this empirical study consists of 6 countries which are Brazil, Australia, Malaysia, South Africa, Mexico and Turkey from each continent in developing countries. Meanwhile, the developed countries chosen are Japan, Mauritius, United States, France, Chile and New Zealand. We use 10-years time period from 2010 to 2019 for both developing and developed countries. All data are collected from the World Bank data and Our World in Data.

Multicollinearity

A model could have issues with multicollinearity if the variables have a strong correlation with one another. We use Variance Inflation Factors (VIF) test to assess the possible multicollinearity problem, where $VIF > 10$ is considered high risk of multicollinearity.

Panel Data Analysis

Since we have six different countries involved, Panel Data Analysis is appropriate. The findings of each analysis in this study were generated using STATA. There are three different models of Panel Data Analysis which are Pooled OLS, Fixed Effect and Random Effect.

a) Pooled OLS Regression Model:

$$POV_{it} = \beta_0 + \beta_1 UNEM_{it} + \beta_2 LNPOPU_{it} + \beta_3 GDP_{it} + \beta_4 GOVER_{it} + \beta_5 LNINCO_{it} \quad (1.1) + u_{it}$$

where

POV_{it} = poverty rate

β_i where $i = 1, \dots, 5$, are the estimated coefficient of independent variables

$UNEM_{it}$ = unemployment rate

$LNPOPU_{it}$ = log of population rate

GDP_{it} = Gross Domestic Product

$GOVER_{it}$ = government spending

$LNINCO_{it}$ = log of income per capita

u_{it} = the error terms

b) Fixed Effect Model:

There are two versions of the Fixed Effect Model, namely the Within-groups Fixed Effect and the Least Square Dummy Variable (LSDV) variables. Firstly, the least square dummy variable (LSDV) Fixed Effect. This model allows for heterogeneity among subjects by allowing each entity to have its own intercept value. Meanwhile, the within group fixed effect model is able to eliminate the fixed effect. According to Nwakuya and Ijomah (2017), the LSDV is the simplest method of isolating individual or time-specific effect in a regression model.

On the other hand, one of its drawbacks is that it is not feasible when the number of explanatory variables is high. It is common practise to use the within-group fixed effect model when attempting to estimate a model with a large number of individuals. The effect of variables that do not vary over the time period cannot be determined using the fixed effect estimator since it is dependent on the within variations. However, if there a large number of individuals (N), using the LSDV method directly is not a practical proposition, given the need for a large number of dummy variables.

Hence, this study used Within -groups Fixed Effect Model given as:

$$POV_{it} = \beta_0 + \beta_1 UNEM_{it} + \beta_2 LNPOPU_{it} + \beta_3 GDP_{it} + \beta_4 GOVER_{it} + \beta_5 LNINCO_{it} + u_{it} \quad (1.2)$$

c) Random Effect Model

According to Stephen (2011), the random effects model is an alternate technique for estimating a model. The constants for each section are handled as random parameters rather than fixed ones in the random effects method, which is different from the traditional fixed effects approach. Hence, the variability of the constant for each section comes from:

$$POV_{it} = \beta_{0i} + \beta_1 UNEM_{it} + \beta_2 LNPOPU_{it} + \beta_3 GDP_{it} + \beta_4 GOVER_{it} + \beta_5 LNINCO_{it} + u_{it} \quad (1.3)$$

Instead of treating β_0 as fixed, we assume that it is a random variable and can be expressed as

$$\beta_{0i} = \beta_0 + \epsilon_i$$

where ϵ_i is a random error term. Thus, we have

$$POV_{it} = \beta_0 + \beta_1 UNEM_{it} + \beta_2 LNPOPU_{it} + \beta_3 GDP_{it} + \beta_4 GOVER_{it} + \beta_5 LNINCO_{it} + u_{it} + \epsilon_i$$

$$POV_{it} = \beta_0 + \beta_1 UNEM_{it} + \beta_2 LNPOPU_{it} + \beta_3 GDP_{it} + \beta_4 GOVER_{it} + \beta_5 LNINCO_{it} + w_{it} \quad (1.4)$$

where

$$w_{it} = \epsilon_i + u_{it}$$

In general, the fixed effects model implies that each country differs in its intercept term, while the random effects model assumes that each country differs in its error term. It stands to reason that the fixed effects model will perform better when the panel is complete (including all available cross-sectional data). The random effects model may be more applicable in other situations where there are few observations of the existing cross-sectional units in the sample. Random effect model assume that the slope coefficient is constant, but the intercept varies over firms and over time.

Test

a) Hausman Test

Based on Gujarati and Porter (2009), the Hausman test is being tested to assist in making a choice between fixed effect model and random effect model to be applied in this study.

H_0 : Fixed Effect Model and Random Effect Model estimators do not differ substantially.

H_1 : Fixed Effect Model and Random Effect Model estimators do differ substantially.

H_0 refers to random effects while H_1 refers to fixed effects. If the null hypothesis is rejected, then the fixed effect model is more appropriate. If the null hypothesis is accepted, the random effect model will be more appropriate to use in this study.

b) Breusch Pagan Test

According to Gujarati (2009) stated that Breusch Pagan test is to test the hypothesis that there are no random effects. That means this test follow these hypotheses:

H_0 : There are no random effects.

H_1 : There are random effects.

If the p-value is less than 5%, then the study can reject the null hypothesis, H_0 . This means random effect model is appropriate. If the null hypothesis is failed to reject, the study does not have random effect.

RESULTS AND DISCUSSION

Descriptive Statistics

Several statistical tests are utilised in this part to examine the distribution of data that describe the factors affecting poverty rate in developed and developing countries.

Table 4.1.1 :Summary Data for developing countries

Variable	POV	UNEM	LNPOPU	GDP	GOVER	LNINCO
Mean	4.3092	9.7167	17.9896	3.2771	16.0086	9.2408
Std. Dev	6.4275	7.7854	0.7585	2.5829	3.1576	0.7023
Min	0.0052	2.8800	16.9080	-3.5458	11.4052	8.3656
Max	19.6718	28.4700	19.1747	11.2001	20.3793	10.8953

Table 4.1.2 :Summary Data for developed countries

Variable	POV	UNEM	LNPOPU	GDP	GOVER	LNINCO
Mean	0.5188	6.4768	17.0573	2.4704	17.4562	10.0758
Std. Dev	0.3494	2.0889	1.9303	1.3814	3.7528	0.6354
Min	0	2.4000	14.0390	0.0238	11.9135	8.8042
Max	1.2499	10.3500	19.6095	6.1109	24.1259	10.9227

For developing countries, the average poverty rate (Mean) is 4.3092, and the Standard Deviation is 6.4275, the minimum is 0.0052, the maximum is 19.6718 while developed countries the average poverty rate (Mean) is 0.5188, and the Standard Deviation is 0.3494, the minimum is 0.0000 and the maximum is 1.2499..For independent variable, the average unemployment (Mean) is 9.7167, and the Standard Deviation is 7.7854, the minimum is 2.8800, the maximum is 28.4700 in developing countries but for developed countries the average unemployment (Mean) is 6.4768, and the Standard Deviation is 2.0889, the minimum is 2.4000, the maximum is 10.3500. Meanwhile, For ln population variable in developing countries, the average (Mean) is 17.9896, and the Standard Deviation is 0.7585, the minimum is 16.9080 and the maximum is 19. 1747. For GDP, the average (Mean), standard deviation, minimum and maximum are 3.2771,2.5829,-3.5458 and 11.2001 respectively. For ln population variable in developed countries, the average (Mean) is 17.0573, and the Standard Deviation is 1.9303, the minimum is 14.0390 and the maximum is 19. 6095.For GDP, the average (Mean), standard deviation, minimum and maximum are 2.4704,1.3814,0.0238 and 6.1109 respectively. Government spending in developing countries also stated that result for mean, standard deviation, minimum and maximum are 16.0086,3.1576,11.4052 and 20.3793 respectively meanwhile government spending in developed countries stated that result for mean, standard deviation, minimum and maximum are 17.4562,3.7528,11.9135 and 24.1259 respectively. Finally for ln income per capita variables, the mean is 9.2408, standard deviation is 0.7023, minimum is 8.3656 and maximum is 10.8953 and for developed countries, ln income per capita variables, the mean is 10.0758, standard deviation is 0.6354, minimum is 8.8042 and maximum is 10.9227.

In addition, since none of the coefficients in Tables 4.1.3 and 4.1.4 demonstrate a serious correlation between the independent variables, this study includes all of the independent variables in the regression. Additionally, multicollinearity was analyzed and evaluated in this study. When the independent variables in the regression model have a high correlation with one another, a concept known as multicollinearity might

occur. The results of the variance inflation factor (VIF), which are presented in tables 4.1.5 and 4.1.6, demonstrate that both developed and developing countries have values that are less than 10, which means that there is no multicollinearity detected among the independent variables. Hence, the result of VIF further approved the inclusion of all variables into the model.

Table 4.1.3 :Correlation Matrix developing countries

	POV	UNEM	LNPOPU	GDP	GOVER	LNINCO
POV	1.0000					
UNEM	0.9225	1.0000				
LNPOPU	0.1027	0.0825	1.0000			
GDP	-0.3621	-0.3011	-0.2497	1.0000		
GOVER	0.4709	0.5519	0.0390	-0.487	1.0000	
LNINCO	-0.4829	-0.4326	-0.4763	0.0013	0.2684	1.0000

Table 4.1.4 :Correlation Matrix developed countries

	POV	UNEM	LNPOPU	GDP	GOVER	LNINCO
POV	1.0000					
UNEM	-0.4834	1.0000				
LNPOPU	0.3402	-0.1241	1.0000			
GDP	0.1143	0.0862	-0.5114	1.0000		
GOVER	-0.4558	0.2102	0.2532	-0.583	1.0000	
LNINCO	0.3428	-0.2114	0.7301	-0.502	0.5374	1.0000

Table 4.1.5 :Variance Inflation factor(developing countries)

Variable	VIF	1/VIF
UNEM	3.97	0.2521
LNPOPU	1.84	0.5432
GDP	1.41	0.7089
GOVER	3.85	0.5432
LNINCO	3.97	0.2517
Mean VIF	3.01	

Table 4.1.6 :Variance Inflation factor(developed countries)

Variable	VIF	1/VIF
UNEM	3.64	0.2744
LNPOPU	2.88	0.3469
GDP	2.65	0.3769
GOVER	2.09	0.4787
LNINCO	1.36	0.7341
Mean VIF	2.53	

Panel Regression Analysis

Model panel data is used to meet the first and second objective of the study which are to identify the relationship between poverty rate, unemployment, population, gdp, government spending and income per capita in both developing countries and developed countries.

Table 4.2.1: Panel regression Analysis (developing countries)

	POV		
	Pooled OLS	RANDOM	FIXED
UNEM	0.6676 (0.000)*	0.6676 (0.000)*	0.2995 (0.000)*
LNPOPU	-0.6837 (0.223)	-0.6837 (0.218)	0.3894 (0.875)
GDP	-0.3338 (0.023)*	-0.3338 (0.019)*	0.1679 (0.002)*
GOVER	0.0183 (0.925)	0.0183 (0.924)	0.2533 (0.180)
LNINCO	-1.5903 (0.076)	-1.5903 (0.071)	0.0521 (0.960)
Constant	25.6180 (0.100)	25.6180 (0.094)	-10.6926 (0.822)
Countries(effect)			
Malaysia		-1.59E-11	
Australia		3.45E-11	
Brazil		-6.34E-12	
South Africa		1.27E-10	
Mexico		2.11E-10	
Turkey		-3.50E-10	
F-test	(0.000)*	(0.000)*	(0.000)*
BP LM test	p-value = (0.000)*(OLS vs Random)		
Hausman test	p-value =(0.000)*(Random vs Fixed)		
R-squared	0.8744	0.8744	0.7609

Note: *significance at 5% level

Table 4.2.2: Panel regression Analysis (developed countries)

	POV		
	Pooled OLS	RANDOM	FIXED
UNEM	-0.2465 (0.089) **	-0.2465 (0.083) **	-0.0632 (0.017) *
LNPOPU	-0.0068 (0.764)	-0.0068 (0.763)	-1.1595 (0.146)
GDP	0.0063 (0.240)	0.0063 (0.814)	0.0185 (0.396)
GOVER	-0.0772 (0.000)*	-0.0772 (0.000)*	-0.0269 (0.478)
LNINCO	0.4383 (0.000)*	0.4383 (0.000)*	-0.9473 (0.000)*
Constant	-2.2901 (0.000)*	-2.2901 (0.000)*	30.6742 (0.000)*
Countries(effect)			
Japan		9.82E-13	
USA		1.40E-12	
Mauritius		1.23E-12	
Chile		-2.75E-12	
France		-1.36E-12	
New Zealand		5.05E-13	
F-test	(0.000)*	(0.000)*	(0.000)*
BP LM test	p-value = (0.000)* (OLS vs Random)		
Hausman test	p-value =(0.000)*(Random vs Fixed)		
R-squared	0.7126	0.7126	0.0972

Note: *significance at 5% level**significance at 10 % level

The result in Table 4.2.1 shows that in developing countries, for the pooled OLS model, the variable unemployment and GDP is significant at 5% significance level but ln population, government spending and income per capita are not significant at 5 % significance level. F test value is significant and R^2 value shows 87.44% of the independent variables are explaining the dependent variable. The result in Table 4.2.2 shows that in developed countries, for the pooled OLS model, the variable unemployment, government spending and ln income per capita are significant at 5% significance level but ln population and GDP are not significant at 5 % significance level.

In table 4.2.1 the common intercept value is 26. 6180. The intercept value for 6 countries are stated in the random table. The random effect for each countries in developing countries like Malaysia, Australia, Brazil, South Africa, Mexico and Turkey stated that the intercept value are $-1.59e-11$, $3.45e-11$, $-6.34e-12$, $1.27e-10$, $2.11e-10$ and -

3.50e-10 respectively or 15.3220,-1.6219,-29.2339,-6.5478,-4.2644 and -19.5140. Firstly, for Malaysia has intercept value 15.3220 lower than common intercept 26.6180, the actual intercept value is (26.6080-15.3220) or 11.2959. For other countries the calculation actual intercept value is the same like Malaysia and the value for each country are 6.2399, -2.6159,13.1658,10.8824 respectively. For developed countries the common intercept value is -2.2901. The intercept value for each country like Japan, United States, Mauritius, Chile, France and New Zealand stated that coefficient effect are 9.83e-13,1.40e-12,1.23e-12, -2.75e-12,1.36e-12 and 5.05e-13 accordingly. To make easier calculation, the value intercept for each country is 13.7207, -8.1944,-8.6565,-19.4752,-8.3031 and 0.7273. The intercept value for Japan is higher by 9.83e-13 than common intercept value -2.2901, the actual intercept value is (-2.2901+13.7207) or 11.4306. For other countries like United states, Mauritius, Chile and France the actual value for each countries by the same calculation in Japan the study identified the value are -10.4845,-10.9466,-21.7653,-10.5933 respectively. For New Zealand the actual intercept value is (-2.2901-0.7273) or -3.0174 because the intercept value for this country is lower than the common intercept. The existing of intercept value for six countries which is differential intercept make differentiate between other model which are pooled OLS and fixed random effect.

The F test score, which indicates significance, demonstrates that 71.26% of the independent variables explain the dependent variable. As a result, the developing model and developed model are both appropriate for the analysis. However, because the dataset consists of panel data, further analysis is required to measure the individual effect of the cross-sectional analysis. To determine whether there is a random effect, the Lagrange Multiplier (LM) test of Breusch and Pagan (1980) is employed.

Both random and fixed effect models are compared to OLS to evaluate which model can increase the goodness of fit while simultaneously reducing measurement error. In Breusch Pagan Lagrange Multiplier test, the null hypothesis is there are no random effects and alternative hypothesis is there are random effects. Based on Table 4.2.1 and 4.2.2 the null hypothesis is rejected since the LM test probability value is 0.000, which is less than 5% significant level. This means, both model in developed and developing countries have random effects and so the random effect model is recommended.

Since this study use of panel data that may contain cross-sectional, time-series, or both effects, it is necessary to perform some crucial tests to deal for the possibility of heterogeneity or individual effects. These effects can be either fixed or random. To verify the situation, Hausman test will be conducted by contrasting the random effect model to a fixed effect model. The result for Hausman test is as in Table 4.2.1 and 4.2.2 indicates that the fixed effect model is more appropriate in both developed and developing model for this dataset since the p-value is less than 5%, hence the null hypothesis be rejected.

From the Lagrange Multiplier (LM) test of Breusch and Pagan, the result stated that the random effect model is recommended and for result hausman test, the result

stated that the fixed model is more appropriate for both developed and developing countries. From these two results, the fixed effect model is more appropriate.

Through the result, the fixed-effect Model for developing countries is as follows:

$$POV_{it} = -10.6926 + 0.2996UNEM_{it} + 0.3894LNPOPU_{it} + 0.1679GDP_{it} + 0.2533GOVER_{it} + 0.0521LNINCO_{it} \quad (0.1)$$

The fixed-effect Model for developed countries is as follows:

$$POV_{it} = 30.6742 - 0.0632UNEM_{it} - 1.1595LNPOPU_{it} + 0.01846GDP_{it} - 0.0269GOVER_{it} - 0.9474LNINCO_{it} \quad (0.2)$$

The results of the fixed effect model for developing countries are presented in Table 4.2.1. At the 5% and 10% significant level, the variables unemployment, GDP, and Ln Income per capita are significant, whereas Ln population and government spending are not significant. The F-value is significance and the R-squared identifies 76.09% of the independent variables could explained the dependent variable. Despite the that Ln Population and government spending are not significant, this study would like to continue with diagnostics testing in order to test the goodness of the model.

In addition, the results of table 4.3.4 show that for developed countries, the variables unemployment and Ln Income per capita are significant at the 5% significant level, but Ln population, GDP, and government spending are not significant. The F-value is a measure of statistical significance, and the R-squared coefficient determines that 9.72% of the independent variables could be relevant for explaining the dependent variable. Despite the fact that Ln Population and government spending are not significant, this study would still like to proceed with diagnostics testing in order to assess how reliable the model is. The problems of autocorrelation and heteroskedasticity will be examined in this study's diagnostic tests. These tests will be conducted on both developed and developing countries.

Firstly, the Wooldridge test has been implemented in panel-data models in order to examine the possibility of serial correlation. As Wooldridge's method uses the residuals from a regression in first differences, the result in developing countries shows that the null hypothesis of no first-order autocorrelation is rejected with a p-value of 0.000, which is less significance level is less than 5%. As a result, this study has first-order autocorrelation. Meanwhile, the findings indicate that the null hypothesis that there is no first-order autocorrelation cannot be rejected for developed countries because of the p-value of 0.1373, which is more than 5% significant. This is shown by the fact that the null hypothesis cannot be rejected. As a result, this model has no first-order autocorrelation.

Finally, a modified Wald test is used to determine whether groupwise heteroskedasticity present in the residuals of the fixed effect regression. The p-value for the Wald test in developing countries is 0.000, while the p-value in developed countries is 0.0071. Based on these confidence level, this also leads to a significant rejection of the null hypothesis. As a result, unrestricted heteroskedasticity exists in

these data, which confirms that heteroskedasticity problem for both developed and developing countries.

Table 4.2.3: Fixed Effect Model with FGLS regression (developing countries)

Independent Variable	FIXED
UNEM	0.6676 (0.000)*
LNPOPU	-0.6837 (0.194)
GDP	-0.3338 (0.014)*
GOVER	0.0183 (0.920)
LNINCO	-1.5903 (0.057)**
Constant	25.6180 (0.077)**
Wald test	0.0000*
Panels	Homokedastic
Estimated	0
autocorrelations	

Note: *significance at 5% level, **significance 10 %

Table 4.2.4: Fixed Effect Model with FGLS regression (developed countries)

Independent Variable	FIXED
UNEM	-0.0246 (0.068)**
LNPOPU	-0.0068 (0.750)
GDP	0.0063 (0.804)
GOVER	-0.0772 (0.000)*
LNINCO	0.4383 (0.000)*
Constant	-2.2901 (0.000)*
Wald test	0.0000*
Panels	Homokedastic

For developed countries, the final Fixed effect Model reveals that the coefficients have mixed magnitudes. Only two of the variables, namely Gross Domestic Product and Ln Income per capita, have magnitudes that are positive, whereas the remaining variables all have magnitudes that are negative (unemployment, Ln population and government spending). The positive magnitudes show that the increment in the 1% unit of gross domestic product, and Ln income per capita will both contribute to an increase in the poverty rate of 0.63% and 43.83% respectively. On the other hands, 1% increments in unemployment population, and government spending will reduce poverty rate by 2.46%, 0.63% and 7.72% respectively.

To summarize, the studies made in developing countries indicates that unemployment significant and positive effect to poverty but for developed countries, unemployment is significantly negative effect to poverty. In developing countries, the result is in line with study by Meo et.al (2018). This implies that an increase in unemployment will lead to a waste of labor resources as well as a reduction in revenue. The decrease in revenue tends to reduce the extent to which the requirements and wants of the economy may be met. Consequently, the level of poverty is likely to increase.

Meanwhile, the result in developed countries supported by Feriyanto et.al (2020). The author indicated that the government need to work on lowering the unemployment rate. The implementation of a strategy aimed at increasing the number of job possibilities, followed by increased labor absorption, will influence the overall rate of unemployment. For population, both developed and developing countries stated result negatively insignificant effect to poverty. This result is line with study by Asrol and Ahmad (2018). They stated that if there is not an accompanying development in other areas of the economy that are able to boost the standard of living for the country's population, then a reduction in population growth will not be enough to bring about a reduction in the level of poverty there.

Next, for GDP variables, the result revealed that GDP negatively significant to poverty in developing countries and the result in line with study Feriyanto(2018) that discovered if the real GDP can be increased by a large amount, this would generate a stronger investment climate, which will open up greater job possibilities, boost welfare, and decrease poverty in the provinces of Indonesia. But for developed countries GDP positively insignificant to poverty as growth should be increased through the creation of a conducive investment climate and labour-intensive environment (Asrol,2018). The result stated that government spending negatively significant to poverty in developing countries. Thus, the result aligned with the previous study that when increase the infrastructure spending tend to decrease poverty level (Alamanda,2020).

While in developed countries the result revealed government spending positively insignificant to poverty. Government spending associated with a suitable source of funding, specialised subsidies for a specified time period, are effective and productive. It may boost private investment, employment prospects, and human

capital by investing in health and education, which decreases poverty (Mehmood, 2010). Lastly, income per capita in developing countries showed that income per capita negatively significant to poverty but for developed countries the result stated income per capita positively effect to poverty. These finding aligned with study Tobolotutu et.al(2018) mention that not only are aspects of a country's revenue capacity related to poverty levels, but also the equitable distribution of a region's public money is linked to poverty levels.

CONCLUSION

This study is carried out to measure the relationship between unemployment, population, economic growth, government spending, income per capita and poverty rate. As explained previously, this study uses five variables to indicate the factors affecting poverty rate in developed and developing countries, which are unemployment, population, economic growth, government spending, income per capita. From this study suggests all of the variables namely unemployment, GDP and ln income per capita are significantly giving impact to poverty rate in various magnitude in developing countries. Except ln population and government spending. In developed countries, all of the variables namely unemployment, government spending and ln income per capita are significantly giving impact to poverty rate in various magnitude. Except ln population and GDP.

The study has a few limitations, which are subject to future improvement. Firstly, the data is slightly limited to get pre and post covid. Due to this limitation, this study cannot do further, and the data only get from year 2010 until 2019 only. Lastly, there are many more factors that will affect poverty, but this study failed to include factor like education because of limitation data.

Based on this finding study, the following recommendation are made. The subsequent research could be carried out on post-covid 19 data over a longer period of time, which would allow for the completion of a more comprehensive investigation. In addition, additional independent variables that impact poverty, such as inflation and climate change, can be included to the research in order to make it more comprehensive in the future.

In general, the findings of this research provided an answer to the questions that were posed in Chapter 1 on the factors that affect the levels of poverty in developed countries and developing countries. The data will be helpful to investors in their research of the factors that influence the poverty and impact the level of poverty. In addition, the outcomes of the variable might be of assistance to the nations in monitoring the extent to which they are exposed to rates of poverty in order to guarantee their continued existence.

REFERENCE

- Agrawal, P. (2007). Economic growth and poverty reduction: Evidence from Kazakhstan. *Asian Development Review*, 24(2), 90.
- Alamanda, A. (2020). The effect of government expenditure on income inequality and poverty in Indonesia. *Info Artha*, 4(1), 1-11.
- Anderson, E., d'Orey, M. A. J., Duvendack, M., & Esposito, L. (2018). Does government spending affect income poverty? A meta-regression analysis. *World Development*, 103, 60-71.
- Araujo, J. A., Marinho, E., & Campêlo, G. L. (2017). Economic growth and income concentration and their effects on poverty in Brazil. *CEPAL Review*.
- Asrul, A., & Ahmad, H. (2018). Analysis of factors that affect poverty in Indonesia. *Revista Espacios*, 39(45).
- Feriyanto, N., El Aiyubbi, D., & Nurdany, A. (2020). The impact of unemployment, minimum wage, and real gross regional domestic product on poverty reduction in provinces of Indonesia. *Asian Economic and Financial Review*, 10(10), 1088-1099.
- Islam, R., Ghani, A. B. A., & Mahyudin, E. (2017). Carbon dioxide emission, energy consumption, economic growth, population, poverty and forest area: Evidence from panel data analysis. *International Journal of Energy Economics and Policy*, 7(4), 99.
- Klasen, S., & Lawson, D. (2007). *The impact of population growth on economic growth and poverty reduction in Uganda* (No. 133). Diskussionsbeiträge.
- Mehmood, R., & Sadiq, S. (2010). The relationship between government expenditure and poverty: A cointegration analysis. *Romanian Journal of Fiscal Policy (RJFP)*, 1(1), 29-37.
- Meo, M. S., Khan, V. J., Ibrahim, T. O., Khan, S., Ali, S., & Noor, K. (2018). Asymmetric impact of inflation and unemployment on poverty in Pakistan: new evidence from asymmetric ARDL cointegration. *Asia Pacific Journal of Social Work and Development*, 28(4), 295-310.
- Muhammad, U. F., & David, J. (2019). Relationship Between Poverty and Unemployment in Niger State. *Signifikan: Jurnal Ilmu Ekonomi*. Vol. 8(1): 71 – 78
- Oriaifoh, A. E. C. L., & Omagbon, P. (2016). Poverty and unemployment and corruption in Nigerian public sector. *IIARD International Journal of Economics and Business Management*. ISSN 2489-0065, 2(2).
- Park, C. Y., & Mercado, R. (2015). Financial inclusion, poverty, and income inequality in developing Asia. *Asian Development Bank Economics Working Paper Series*, (426).

- Škare, M., & Družeta, R. P. (2016). Poverty and economic growth: a review. *Technological and Economic development of Economy*, 22(1), 156-175.
- Tombolotutu, A. D., Djirimu, M. A., Lutfi, M., & Anggadini, F. (2018, May). Impact of life expectancy, literacy rate, opened unemployment rate and gross domestic regional income per capita on poverty in the districts/city in Central Sulawesi Province. In *IOP Conference Series: Earth and Environmental Science* (Vol. 157, No. 1, p. 012058). IOP Publishing.
- Ukpong, I. G. (2013). Cointegration inferences on issues of poverty and population growth in Nigeria. *Journal of Development and Agricultural Economics*, 5(7): 277 – 283.
- Yusri, A. (2022). Does Government Expenditure Affect Poverty, Health, and Education? Evidence from Aceh, Indonesia. *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning*, 6(1), 1-20.