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VOL. 1 (4) 2025

The 5th International Conference on the Future of ASEAN 2025

Guest Editors
**Nurul Labanihuda Abdull Rahman, Chen Jen Eem, Hairulniza Abd Rahman,
Noraini Nasirun @ Hirun and Siti Nur Zahirah Omar**

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J O U R N A L S

A scientific journal published by Universiti Putra Malaysia Press

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Contents

Preface

The 5th International Conference on the Future of ASEAN (ICoFA 2025), held in conjunction with the Malaysia's Chairmanship of ASEAN, provided an important platform for scholars, researchers, and industry practitioners to engage in meaningful discourse and share research findings in a dynamic and intellectually stimulating environment. The conference theme, "*Towards ASEAN Community Vision 2025,*" emphasised the region's aspirations for unity, peace, stability, and sustainable development—anchored in three fundamental pillars of Political-security, Economic, and Socio-cultural Communities.

This volume of conference proceedings, published in collaboration with UPM Press under the esteemed *Pertanika Journal*, represents a selection of peer-reviewed papers that were presented during the conference. It is both an honour and a privilege for contributors to have their work featured in this publication, which reflects the ongoing academic commitment to examine the transformative forces shaping the ASEAN's future. The majority of papers included in these proceedings align closely with the conference's core theme, addressing topics that prioritise the aspirations, well-being, and inclusive development of the ASEAN's people. Through these contributions, the proceedings aim to inspire further academic inquiry and collaborative research that will support regional integration and policy development in the ASEAN member states.

We gratefully acknowledge UPM Press and the *Pertanika* editorial team for their invaluable support in the publication process. Our deepest appreciation also goes to our academic and industry partners, collaborators, and all participants who contributed to the success of the ICoFA 2025. Special thanks are due to the dedicated members of the ICoFA 2025 Organising Committee, whose tireless efforts ensured the smooth execution of both the conference and subsequent publication. This proceedings volume stands as a testament to the collective scholarship and collaborative spirit that continue to drive ASEAN forward.

Guest Editors
Nurul Labanihuda Abdull Rahman (Dr.)
Chen Jen Eem (Dr.)
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The Role of Attitude on the Relationship Between Recruitment and Selection with Performance: A Proposed Model

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ABSTRACT

Despite increasing awareness of the need for fair recruitment and selection practices, biases persist within these processes. This study aims to identify the factors contributing to these biases, highlighting that 84% of candidates perceive recruitment methods as unfair (Vanderpal & Brazie, 2022). Furthermore, many managers lack accurate information about candidates before interviews, complicating effective human resource management. Existing research often overlooks the moderating roles of work attitudes (WA) and job involvement (JI) in this context. This study addresses this gap by exploring the relationship between human resource management practices and performance in government agencies, integrating WA and JI into a unified model. Doing so aims to provide actionable insights into how enhancing employee attitudes can improve performance outcomes in public sector organisations.

Keywords: Job involvement, performance, person-environment fit, recruitment and selection, work attitude

INTRODUCTION

Employee recruitment involves attracting a diverse candidate pool to identify the most qualified individuals, making effective recruitment and selection crucial for organisational success. Human resources (HR) are often regarded as a company's most valuable asset, emphasising the need

for strong recruitment strategies. While poor selection is believed to hinder performance, empirical evidence remains limited (Khan, 2023). Research highlights the importance of hiring competent employees, yet many organisations struggle with biased recruitment, leading to suboptimal outcomes (Vanderpal & Brazie, 2022). However, studies often overlook employee attitudes, such as work attitude (WA) and job involvement (JI), in assessing recruitment's impact on performance. This study addresses this gap by examining the relationship between HRM practices and performance in government agencies, incorporating WA and JI as moderating factors. The findings will offer valuable insights into optimising the public sector'srecruitment for enhanced engagement and organisational success.

LITERATURE REVIEW

Relationship Between Recruitment and Selection Practices with Performance

Recruitment and selection practices are vital for improving organisational performance. Effective recruitment methods attract qualified candidates, while appropriate selection criteria ensure the best fit (Sparrow et al., 2021). Research shows that robust recruitment and selection processes correlate positively with enhanced employee performance (Chong, 2022). Poor practices can lead to hiring mismatches, undermining overall effectiveness (Khan, 2023).

The Moderating Role of Work Attitude

Work attitude (WA) significantly influences the impact of recruitment and selection on performance. A positive WA fosters employee engagement and satisfaction, enhancing productivity (Kundi et al., 2020). When candidates with favourable attitudes are selected, they are more likely to contribute positively, suggesting that WA moderates the relationship between recruitment practices and employee performance (Huntsman et al., 2023).

The Moderating Role of Job Involvement

Job involvement (JI) further moderates the relationship between recruitment practices and performance. High JI indicates strong psychological identification with one's job, leading to heightened effort and discretionary behaviours (Bach & Kessler, 2021). By integrating strategies that boost JI into recruitment and selection, organisations can significantly enhance employee performance, underscoring JI's role as a critical moderator in this dynamic (Soelton et al., 2020).

In summary, effective recruitment and selection are paramount for employee performance, with work attitude and job involvement serving as influential moderators in this relationship.

Theoretical Foundations

Person-environment (P-E) fit, based on interactionist theory, emphasises the interplay between individuals and their environments in shaping behaviour (Chatman, 1989; Pas & Freese, 2021). It reflects the alignment between personal traits and the work environment, enhancing job satisfaction, commitment, and performance (Heather, 2013; Muchinsky & Monahan, 1987).

Theoretical Framework
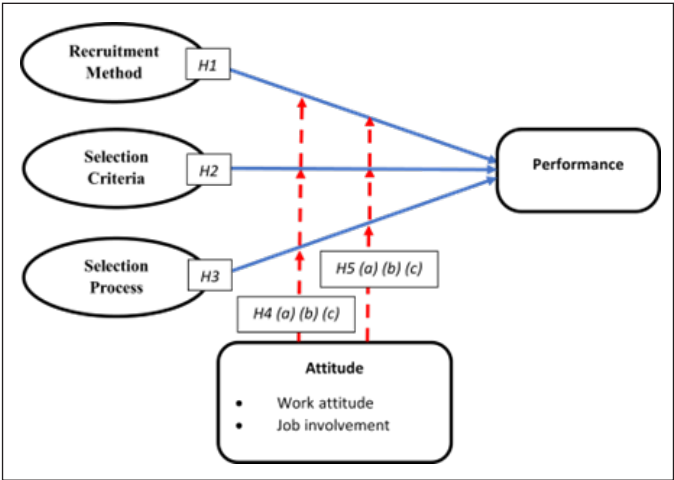
Figure 1. The moderating role of attitude towards the relationship between recruitment and selection with performance

METHODOLOGY

This study adopts a mixed-method approach, combining a quantitative survey of 403 MyIPO employees with qualitative interviews of six employees for deeper insights (Creswell & Creswell, 2017). A five-point Likert scale will measure key constructs, including Recruitment Method (RM), Selection Criteria (SC), Selection Process (SP), Job Involvement (JI), Work Attitude (WA), Job Performance (JP), and Organisational Performance (OP) using established scales (Chen et al., 2020; Jaiswal & Kumar, 2020; Mwita et al., 2023). Data analysis will assess reliability, factor structure, and variable relationships using the Structural Equation Modelling (SEM) in IBM Amos, including Confirmatory Factor Analysis (CFA) to evaluate model fit. Work attitude and job involvement will be tested as moderating factors, with Common Method Variance (CMV) controlled to ensure robust findings.

CONCLUSION

This study emphasises the importance of structured and fair recruitment practices in enhancing employee performance while minimising biases. Organisations can improve hiring outcomes through fair methods, structured interviews, and recruiter training. Future research should explore technology integration, cultural biases, and the long-term impact of HR practices on organisational success.

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Investigating the Role of Age, Work Tenure, and Gender in Shaping Organisational Citizenship Behaviour Among TVET Teachers in Malaysia

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ABSTRACT

Organisational Citizenship Behaviour (OCB) is crucial for fostering sustained advance and development in organisations, with its impact being especially significant in the education sector, where it contributes to enhancing educational quality. While various studies have explored the factors influencing OCB in Malaysia, its specific application within the education sector, particularly in technical and vocational settings, remains insufficiently examined. This study addresses that gap by investigating the effects of teachers' age, working tenure, and gender on OCB within Technical and Vocational Education and Training (TVET) institutions in Malaysia. 425 teachers from 70 vocational colleges across Peninsular Malaysia were selected conveniently, and the findings reveal that age, tenure, and gender significantly influence OCB. These results emphasise the importance of teacher demographics in recognising the dynamics of OCB. The study not only lays the groundwork for future research on the interplay between demographic factors and OCB but also offers practical insights for educational leaders and administrators which particularly within the public TVET system means to develop strategies that boost teacher performance and organisational effectiveness.

Keywords: Age, gender, organisational citizenship behaviour, technical school and vocational education and training, working tenure

INTRODUCTION

Organisational Citizenship Behaviour (OCB) has emerged as a key focus in behavioural science for its beneficial effects on workplace performance, particularly in

schools. In schools, teachers who exhibit OCB contribute significantly to organisational success by enhancing collaboration, adaptability during challenging times, and overall institutional performance (Nguyen & Haar, 2024; Kong & Belkin, 2021). Despite its importance, limited research has explored how demographic factors such as age, tenure, and gender influence OCB, particularly among teachers in Malaysian vocational colleges, a gap this study seeks to address, providing insights for fostering OCB in schools.

LITERATURE REVIEW

Teacher's Age, Working Tenure, and Gender with OCB

OCB, originating from Katz's 1964 work, involves voluntary behaviours beyond formal job roles that improve organisational performance (Somech & Bogler, 2023). Popularised by Organ in the 1980s, it enhances efficiency without expecting rewards. In education, teachers' voluntary actions like mentoring contribute to school success (Nguyen & Haar, 2024).

Factors such as personal characteristics, job attitudes and demographic such as gender and age had been identified as influencing OCB. Research by Asif et al. (2025) revealed that women over the age of 40 tend to exhibit higher levels of OCB. Additionally, organisational factors like a supportive work environment and employee empowerment have been shown to encourage OCB at the workplace (Kong & Belkin, 2021). However, there is still a lack of studies assessing the role of demographic factors in shaping OCB within the context of Technical and Vocational Education and Training (TVET) institutions. As highlighted by Kamar et al. (2024), cultural variations may also influence these dynamics influence of demographic factors on OCB.

Research Objective

There are three research objectives:

- RO1: To examine the relationship between age and OCB.

- RO2: To investigate the relationship between tenure and OCB.

- RO3: To explore the relationship between gender and OCB.

METHODOLOGY

Utilising Krejcie and Morgan's (1970) sampling framework, this study involved a sample of 375 full-time teachers from technical and vocational institutions across Peninsular Malaysia, were selected from a total population of 7,796. To achieve a response rate of 75%, a total of 500 questionnaires were distributed by using a probability sampling approach to ensure balanced demographic representation. Ethical clearance was obtained from both Universiti

Teknologi MARA (UiTM) and the Ministry of Education Malaysia. The instrument used to assess OCB was a pre-validated questionnaire adapted from Podsakoff et al. (1990), covering five key dimensions of OCB. Data were analysed using SPSS, incorporating factor analysis, reliability testing, ANOVA, and t-tests to examine the influence of demographic variables on OCB within the Malaysian TVET context.

RESULT AND DISCUSSION

ANOVA results showed significant age-related differences in altruism ($F = 5.605$, $p = .000$), conscientiousness ($F = 8.662$, $p = .000$), and sportsmanship ($F = 9.759$, $p = .000$), but not in courtesy ($F = 1.886$, $p = .130$). Grade level also significantly affected all four OCB dimensions. A t-test revealed a gender difference in sportsmanship ($t = 2.844$, $p < 0.05$), with no significant differences in other dimensions. The findings suggest older and senior teachers display higher OCB, while gender influences sportsmanship. Mentorship and inclusive strategies are recommended to enhance OCB in TVET settings (Ahmad et al., 2022).

CONCLUSION

This study highlights the influence of age, working tenure, and gender on OCB among TVET teachers in Malaysia. It expands the understanding of OCB in a developing country context and lays the foundation for future research on additional demographic factors that may shape teachers' extra-role behaviours in educational settings.

ACKNOWLEDGEMENT

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Exploring Cost of Living, Learning Environment, Financial Aid and Academic Achievement Influencing Well-Being Among B40 University Students

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ABSTRACT

This study examines the impact of cost of living, learning environment, financial aid, and academic achievement on the well-being of B40 university students. Using a quantitative cross-sectional survey, data were collected from 157 UiTM students through random sampling. Results showed a moderate positive relationship between cost of living and learning environment with well-being, but no significant link between financial aid and academic achievement. While the study is limited to UiTM and a few variables, it highlights the importance of ensuring financial aid meets students' needs and suggests that educational providers consider these factors to improve student well-being.

Keywords: Academic achievement, cost of living, financial aid, learning environment, students' well-being

INTRODUCTION

Malaysian university students from the Bottom 40% (B40) income group face challenges in academic performance, learning environments, and financial stress (Shamsuddin et al., 2024). Financial difficulties worsened by the COVID-19 pandemic affect many students, with 60% at Universiti Teknologi MARA (UiTM) from B40 households (Bunyan, 2024). Limited resources like technology and textbooks contribute to academic and psychological stress. A supportive learning environment improves student outcomes and resilience (Mansor et al., 2022; Sabri et al., 2023). Financial behaviour and strong support systems are essential to reduce stress and enhance financial well-being (Shamsuddin et al., 2024).

Financial aid is crucial for easing financial burdens and improving academic performance (Sia, 2024). Despite benefiting 3.67 million students through PTPTN, accessibility and sufficiency remain concerns (Malay Mail, 2024). Financial pressures exacerbate stress and academic difficulties. However, studies often overlook cost-of-living factors like housing and transportation in relation to academic success and mental health.

While most research focusses on enrollment and retention, the impact of financial aid on well-being and academic performance remains underexplored. This study aims to fill that gap by examining how financial stress affects B40 students and identifying effective support systems. The findings will provide insights to improve student support, learning environments, and financial aid, reducing financial instability and enhancing performance.

LITERATURE REVIEW

Well-Being of University Students

Well-being is a multifaceted concept encompassing physical, mental, and spiritual health, and contributes to happiness and personal growth (Myers & Sweeney, 2005; Jarden & Roache, 2023). A significant portion of Malaysian university students experiences mental health issues such as depression (42.2%), anxiety (73.7%), and stress (34.8%) (Shahira et al., 2018). These issues can impact academic performance and overall well-being (James, 2016; Salleh et al., 2024).

Cost of Living and Financial Strain

The rising cost of living disproportionately affects lower-income students, particularly B40 students, and can lead to financial instability, risking dropouts (Rashid et al., 2023; Sani et al., 2020). Financial pressures are exacerbated by the increasing costs of essentials, undermining educational sustainability and future opportunities (Cribb et al., 2023).

Learning Environment and Financial Aid

The quality of the learning environment and access to support systems like tutorials and peer connections can alleviate stress and promote academic success (Pérez-Villalobos et al., 2023). Financial instability, worsened by the rising cost of living and limited access to part-time jobs, particularly affects B40 students (Salleh et al., 2022). Timely financial aid is crucial to support students' mental health and academic performance (Bakar et al., 2019; Sabri et al., 2023).

Academic Achievement

A strong link exists between academic success and well-being, where high academic achievement correlates with greater resilience and life satisfaction (Cobo-Rendon et al.,

2020; Shamsuddin et al., 2024). However, stress and low motivation, common among students, can hinder academic performance (Joharry, 2023).

METHODOLOGY

The study employed a quantitative research design to collect and analyse numerical data using structured and validated tools (Trafimow & MacDonald, 2017). The approach enabled researchers to generate useful statistics for descriptive and statistical analysis, and make generalisations from a sample to a larger population (Banerjee & Chaudhury, 2010). A correlation method was used to examine relationships between multiple variables and assess differences within the sample (Williams, 2007).

Data collection was conducted through a survey questionnaire created using Google Forms. A non-probability convenience sampling method was adopted, distributing the questionnaire via WhatsApp to Universiti Teknologi MARA (UiTM) Malaysia students. This sampling method was chosen for its accessibility and widespread use in social science research (Winton & Sabol, 2022). The questionnaire, available in both the English and Malay Language, was developed based on a literature review to ensure its relevance (Fink, 2019).

The study sample consisted of 157 UiTM students. Data analysis was conducted using IBM SPSS Statistics version 22.0, with Pearson correlation analysis used to assess relationships between cost of living, learning environment, financial aid, academic achievement, and student well-being.

RESULTS AND DISCUSSIONS

Demographic Profile

The study involved 157 B40 university students, including 139 females (88.5%) and 18 males (11.5%). Most were aged 20-23, with 50.3% studying for diplomas and 49.7% for degrees. The sample was mostly full-time students (98.7%), with 42% in semester two. Most participants were from the Faculty of Business and Management (70.7%), and all came from households earning less than RM4850 monthly.

Hypothesis Testing

Pearson correlation analysis was conducted to examine the relationship between cost of living, learning environment, financial aid, and academic achievement in relation to the well-being of B40 university students. The results revealed a moderate positive correlation between well-being and both cost of living ($r = 0.351$, $p < 0.001$) and learning environment ($r = 0.584$, $p < 0.001$). However, financial aid ($r = 0.021$, $p = 0.398$) and academic achievement ($r = 0.052$, $p = 0.260$) were not significantly related to well-being.

The cost of living and supportive learning environments positively correlate with well-being, as financial security and a sense of inclusion improve mental health (Morales-Rodríguez et al., 2020; Riva et al., 2020). Financial aid's stability and availability are key, with its type less important as long as it meets students' needs (Nasr et al., 2024). Well-being is shaped by emotional, social, and financial factors, not just academic performance. High academic pressure can cause stress, negatively impacting well-being (Wahyuni et al., 2022; Klapp et al., 2024). Overall, reducing financial stress and improving the learning environment should be prioritised to enhance student well-being.

CONCLUSION

In conclusion, this study examines the well-being of B40 university students, focussing on cost of living, learning environment, financial aid, and academic achievement. The findings show a moderate positive relationship between cost of living and learning environment, while financial aid and academic achievement are not statistically significant to their well-being. Financial aid has little impact, suggesting it should meet students' actual monetary needs rather than just being from loans, scholarships, or self-funding sources. The study also found no evidence that academic achievement is positively correlated with well-being, as well-being is influenced by various factors beyond academics. Recommendations include teaching budgeting skills to manage expenses, creating effective study spaces, providing work-study programmes, offering emergency grants, and promoting time management. Future research should explore qualitative or longitudinal studies to capture changes over time and include additional variables like mental health support and social capital.

ACKNOWLEDGEMENT

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Factors Influencing Online Travel Purchase Decision Among Youth Traveller in Malaysia

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ABSTRACT

While past research has mostly concentrated on online travel products, there has been little focus on the services provided through travel websites. In fact, only one study has specifically looked into how young consumers in Malaysia make online travel purchase decisions. Addressing the gap, the current study aims to explore and better understand the factors that influence these decisions among Malaysian youth travellers. This conceptual paper discusses important elements such as website design, perceived risk, perceived usefulness, subjective norms, and trust. It examines how these factors are connected and how they affect young consumers' choices. By doing so, the paper not only adds to the existing body of the research but also emphasises the importance of these factors in shaping the online travel purchase decision of youth in Malaysia.

Keywords: Online travel purchase decision, perceived risk, perceived usefulness, subjective norms, trust, website design

INTRODUCTION

To build customer loyalty and encourage repeat purchases, it is essential for business to offer outstanding customer services (Gounaris et al., 2010; Rita et al., 2019). Excellent services quality plays a crucial role in achieving customer satisfaction which often translates into favourable customer behaviours (Brady & Roberston, 2011). In the real of e-commerce, having a website with reliable system performance, accurate information, and high quality electronic services is key to success (Sharma & Lijuan, 2015). Customers are likely to avoid websites they perceive as untrustworthy. However, strong brand recognition can

enhance the credibility of a website and help build customer trust (Chang & Chen, 2008; Mohsein et al., 2018).

Youth travellers are typically eager to explore new destinations and often have the leisure time to do so, although their limited disposable income can be a constraint. In today's digital ages, the promotion of both products and services has become increasingly widespread through technological platforms. At several stages of the product life cycle, from encouraging experimentation to implementing brand modification to sustaining brand loyalty, promotions are useful (Pinto & Castro, 2019). Even though they have the financial means to do so, young travellers when it comes to the value for their money (Glover, 2010).

PROBLEM STATEMENT

Online travel agencies (OTAs) serve as platforms that consolidate services from various businesses within the travel and tourism industry, providing consumers with a convenient way to make reservations. These agencies promote and sell travel related products such as hotel accommodations, flight tickets, transportation services, and vacation packages through websites and mobile applications (Rezgo, 2019). For instance, Malaysia Airlines (MAB) leveraged the Airline Revenue Maximisation Solution (ARMS), which provides a comprehensive overview of an airline's revenue system and utilises predictive forecasting to tailor pricing and offers based on customers' willingness to pay. As a result, MAB achieved a 57% increase in passenger revenue yield in 2021, despite experiencing lower passenger traffic and reductions in capacity by 62% and 71%, respectively.

To foster repeat purchases and build customer loyalty, businesses must deliver outstanding customer service (Rita et al., 2019). Providing high-quality service is essential for achieving strong customer satisfaction, which often leads to favourable behavioural intentions (Brady & Robertson, 2001). In the context of e-commerce, success largely depends on the quality of a website's system, the accuracy and usefulness of its information and the overall quality of its electronic services (Sharma & Lijuan, 2015). Customers could choose not to visit a website they do not trust. Customers with high brand awareness may boost the dependability of websites and foster client trust (Chang & Chen, 2008; Mohsein et al., 2018). Online merchants often create information asymmetry as customers are unable to fully assess or understand the quality of services prior to making a purchase (Punyatoya, 2018).

Perceived risk plays a significant role in shaping online purchase behaviour. For example, users may worry about being limited to a narrow selection of accommodations, overpaying for lodging or needing to make repeated bookings. Additionally, concerns about data privacy and security arise when consumers are required to share financial details during hotel or flight reservations. Previous studies have emphasised how these concerns contribute to mobile apps (Ng & Wakenshaw, 2017; Laukkanen, 2016; Guttentang &

Smith, 2017). When booking travel online, customers must disclose extensive personal and financial information, which increases their exposure to potential risk. Common issues include receiving unsatisfactory services after completing a transaction, despite paying via credit or debit card. Similarly, Akhlaq and Ahmed (2015) conclude that when consumers perceive online transactions as risky, their likelihood of completing a purchase decreases.

In addition, previous research suggests that perceived usefulness has a stronger influence on user behaviour compared to perceived ease of use (Kucukusta et al., 2015). They concluded that when it comes to consumer's online travel, efficacy, efficiency and functionality are more important than perceived ease of use. When performance outperforms expectations, customer happiness rises (Liang & Shiau, 2018; Choi et al., 2015). Customer satisfaction with purchase decisions should be influenced by perceived usefulness.

Furthermore, people frequently look to groups for their standard or assessment regarding certain behaviour, but few researchers have examined the impact of subjective norms on online purchase decisions. According to Wang et al. (2016), it has been asserted that customers utilise social networking sites to connect with their friends and family when they want to look up for travel related information sources. The results also showed that customers' purchase decisions are positively influenced by immediate feedback about information sources. When searching for travel accommodations on websites, users examine the review left by previous guest where these reviews have a big impact on other customers purchasing decision (Sun et al., 2020; Mauri & Minazzi, 2013).

Aside from subjective norms, trust is another main issue that needs to be addressed in this study. Consumers' expectations for services or products form the basis of trust if these expectations are not discovered where consumers' confidence will decline or even vanish (Wijaya & Warnadi, 2019). Consumers' trust in online purchase and the impact of their privacy and security policy disclosure on websites (Punyatoya, 2018). Customers who have had positive experiences with a service provider in the past are more likely to trust them to keep their promises in the future (Ganesan, 1994). Having positive encounters minimise ambiguity and foster trust which should result in a longer lasting connection (Morgan & Hunt, 1994).

CONCLUSION

The approach of the present study differs slightly from previous research. It aims to further explore consumer travel purchase decisions on travel websites using a cross-sectional methodology, incorporating both individual interviews and surveys for data collection. In addition to enrich the existing literature on online travel purchase decisions among youth, this study offers practical insights for both consumers and travel organisations. It highlights ways to enhance online travel platforms to better align with consumers' preferences and expectations, particularly among youth travellers. The study introduces a new conceptual

framework that expands the understanding of online travel purchase decisions. A significant contribution of this research lies in its extension of the Technology Acceptance Model (TAM) by incorporating three additional variables which are website design, perceived risk, and trust. By gaining deeper insights into youth purchase decisions, travel agencies can develop more effective marketing strategies and foster customer loyalty in online environments. Ultimately, this research aims to offer valuable guidance for improving the online travel purchase experience, especially for youth Malaysian travellers.

ACKNOWLEDGEMENT

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Analysing Factors Contributing the Failure Rate in an Ordinary Differential Equations Course Using the Fuzzy TOPSIS: A Case of Undergraduate Students at UiTM Perlis Branch

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ABSTRACT

High failure rates in the Ordinary Differential Equations (MAT522) course at UiTM Perlis Branch are a major concern for students in the Bachelor of Science (Hons.) Management Mathematics (CS248) and Bachelor of Science (Hons.) Physics (AS203) programmes. This study aims to analyse the factors contributing to this failure rate and rank them using the Fuzzy TOPSIS. Three factors were examined: poor study habits, negative peer influence, and external distractions. These were assessed based on four criteria: lack of understanding, insufficient practice, fear of mathematics, and lack of self-confidence. Data were collected via questionnaires from lecturers who taught MAT522, serving as decision-makers. The findings revealed that external distraction is the most significant factor impacting the students' performance in MAT522, followed by negative peer influence and poor study habits, with the closeness coefficient of 0.884, 0.564, and 0.053 respectively. These findings emphasise the need for strategies to raise the students' awareness of distraction's impact and improve self-control in the digital era.

Keywords: Fuzzy TOPSIS, mathematics performance, ordinary differential equations, undergraduate students

INTRODUCTION

Ordinary Differential Equations (MAT522) is a core course for the undergraduate students in the Bachelor of Science (Hons.) Management Mathematics (CS248) and Bachelor of Science (Hons.) Physics (AS203) programmes at Universiti Teknologi MARA (UiTM). Students in these programmes typically have a strong background in mathematics from their

matriculation or diploma studies. Based on the UiTM student admission portal, students must hold a diploma in statistics, actuarial science or mathematical sciences with a minimum GPA of 2.50. For matriculation graduates, eligibility requires a grade of C+ in two (2) mathematics subjects and a GPA of 2.50. As outlined in the UiTM study plan, students must pass Calculus 1 (MAT421) and Calculus II (MAT441) before enrolling in MAT522.

A significant failure rate among CS248 and AS203 students in MAT522 at UiTM Perlis was observed over two consecutive semesters: October 2022-February 2023 and March-July 2023. In the October 2022-February 2023 semester, 59% of CS248 students and 47% of AS203 students failed MAT522. While, in March=July 2023 semester, the failure rates were 23% for CS248 students and 38% for AS203 students. Previous studies reported that high failure rate in mathematics courses are poor study habits (Fitrianti & Riyana, 2020), negative peer influence (Xu et al., 2023), and external distractions (Pérez-Juárez et al., 2023). The main reasons for the poor performance in MAT522 at UiTM Perlis have not been fully investigated.

This study examines and ranks the factors influencing the failure rate of MAT522 among CS248 and AS203 students at UiTM Perlis using the Fuzzy TOPSIS. Given the involvement of expert opinions in systematically rank the factors, the Fuzzy TOPSIS is the most suitable method for handling uncertainty and ensuring a comprehensive analysis (Do, 2024). Identifying these factors can lead to personalised learning experiences, helping students overcome challenges, and graduate on time. Additionally, it allows UiTM Perlis to maintain high educational standards and its academic reputation.

MATERIALS AND METHODS

This study involved three experienced MAT522 lecturers from UiTM Perlis as decision-makers to assess the failure rate of MAT522. Four decision criteria: lack of understanding, insufficient practice, fear of mathematics, and lack of self-confidence were evaluated against three factors: poor study habits, negative peer influence, and external distractions. Data were collected through questionnaires using linguistic variables and analysed using the Fuzzy TOPSIS method. The Microsoft Excel was used to rank the factors, identifying the most significant contributors to student failure.

RESULTS AND DISCUSSION

This study identifies external distractions as the leading cause of MAT522 failure among UiTM Perlis students, followed by negative peer influence and poor study habits, with the closeness coefficients of 0.884, 0.564, and 0.053 respectively.

The findings of this study align with previous research emphasising that external distractions, such as social media and financial constraints, significantly hinder the students' focus and academic performance. While technology enhances learning, excessive use can

become a major distraction. This corresponds with Pérez-Juárez et al. (2023) and Liao and Wu (2022), who found that frequent smartphone and social media usage negatively impact the students' academic success. However, Martens et al. (2024) argued that phone usage during study sessions does not directly affect grades, instead emphasising the role of university quality and cultural attitudes. The differing findings may be due to this study's focus solely on students who failed MAT522.

CONCLUSION

This study examined the high failure rates in MAT522 at UiTM Perlis and ranked the contributing factors using the Fuzzy TOPSIS method. The analysis identified external distraction as the most significant factor affecting the students' performance. These findings highlight the need for strategies to raise awareness of the negative impact of distractions and enhance the students' self-control in the digital era. Future research should consider additional factors like the students' backgrounds and socio-economic status for a more detailed analysis. Future research could explore the impact of tutoring programmes and study workshops on mathematics achievement. Expanding the study to other UiTM campuses would enhance the validity and generalisability of the findings. Additionally, applying this research to other high-failure mathematics courses at both degree and diploma levels could help develop comprehensive strategies to reduce failure rates and improve academic success.

ACKNOWLEDGEMENT

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PERTANIKA PROCEEDINGS

Well-Being in Malaysia: A Social and Psychological Perspective between Demographic Indicators

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ABSTRACT

Well-being is a complex phenomenon that may be determined by a variety of circumstances including demographic indicators. Yet relatively few research has explored the notion of social and psychological well-being among the Malaysian population. The primary aim of this study is to develop a Malaysian-specific index assessing social well-being (SWB), psychological well-being (PWB), and negative emotional symptoms (NES) between varying demographic factors. The study is a cross-sectional design including 382 participants from various ages, genders, ethnicities, number of dependents, family incomes, and educational levels. The results suggested that demographics of gender, education, and income significantly differed for social well-being. While for psychological well-being, mean differences between age and educational level were found. Lastly, negative emotional symptoms indicated differences between age, educational level, and income. To conclude, the findings of this study may be valuable for practical implications to private and government entities in alleviating discrepancies between demographic groups among Malaysians' well-being.

Keywords: Malaysian demographics, negative emotional symptoms, psychological well-being index, social well-being index

INTRODUCTION

Psychological well-being (PWB) has been defined as a complex concept consisting of happiness, mental health, and life satisfaction (Dhanabhakyam & Sarath, 2023), while social well-being (SWB) focusses on the relationship with others and feelings of safety (Dunaeva, 2018). Despite

existing studies in Malaysia, significant gaps remain in understanding demographic impacts on well-being (Awang et al., 2022; Isa & Ahmad, 2022). Additionally, the Malaysian Well-being Index (MyWI) being used to measure economic and social indicators among the citizens lack several significant elements such as PWB. This suggests the need to further investigate the psychological and social well-being dimensions among Malaysian demographics.

LITERATURE REVIEW

Psychological and social well-being are interconnected and essential for personal growth and social integration. Social well-being (SWB) refers to community belonging, social relationships, and access to local facilities (Aked et al., 2008). Housing and neighbourhood environment significantly impact well-being (Rolfe et al., 2020), along with the disparity between living costs and income. A supportive environment and strong social bonds further enhance well-being. In Malaysia, SWB including housing, healthcare, and education, is linked to demographics (Isa & Ahmad, 2022). However, urban poor Malaysians face limited healthcare access (Wahab et al., 2020). Psychological well-being (PWB) is based on eudaimonic perspective that consists of six dimensions including self-acceptance, personal growth, autonomy, positive relations with others, environmental mastery, and purpose in life (Ryff, 1989). Spirituality and religiosity also contribute to individuals' PWB (Ryff, 2021). From a hedonic view, life satisfaction is related to fulfillment and flourishing (Kalonia et al., 2022). Past studies emphasised the significant association between sociodemographic variables and PWB (Cobb-Clark & Kettlewell, 2021). In Canada, Varin et al. (2024) concluded that older individuals and marital status is linked to greater PWB, while mood disorders and stress reduces it. Additionally, life satisfaction levels correlate with higher income and younger age during the pandemic in Germany (Geprägs et al., 2022), while those between 38 to 46 years old and perceived poor health in Peru reduces it (Durand-Sanchez et al., 2023). In Malaysia, life satisfaction and well-being declines with age, particularly women over 75 years (Park & Joshanloo, 2021). Nonetheless, further research is required to identify the diverse factors influencing PWB among Malaysians.

METHODOLOGY

Participants and Materials

This study was a cross-sectional study that recruited individuals aged 20 years old and above through the snowball sampling technique. There was a total of 382 (n = 229 females) participants who completed the survey. The participants were Malaysians from diverse socio-demographic backgrounds including age, race, educational level, household income, and location. The questionnaire implemented for this study was developed with seven

experts from the related field through two focus group discussions based on existing scales and past literature. The survey consisted of 81 items on SWB (13 dimensions), PWB (3 dimensions), and NES (Depression, Anxiety, and Stress Scale) (Lovibond & Lovibond, 1995). Cronbach's alpha indicated high internal consistency for the overall social (α = 0.915) and psychological well-being (α = 0.785), with most of the dimensions ranging from 0.7 to 0.9. The DASS subscales and the overall negative emotional symptoms also suggested high reliability ranging between 0.81 to 0.94.

RESULTS

Demographics

Overall, there are slightly more females than males in this study, mostly aged 45 to 49 years old. The majority of the respondents are Malay, married, and obtained a Bachelor's degree. Among the major cities, Johor Bahru received the most responses. Additonally, most of the sample had no dependants, earned between RM7,000 and RM10,969 monthly, and live in their own homes.

Descriptive Analysis and Mean Comparison

The Shapiro-Wilk test showed non-normal distribution (p < 0.05) for all dimensions, which is common in questionnaire data and no outliers were detected. SWB rating was highest for "cleanliness" (M = 4.55, SD = 0.46). PWB presented high mean scores including spirituality (M = 4.45, SD = 0.50), personal growth (M = 4.13, SD = 0.61), and life satisfaction (M = 4.67, SD = 1.09), while the overall NES were low (M = 2.30, SD = 0.72). Mann Whitney U and Kruskal-Wallis were conducted to determine the mean rank differences in well-being across demographics. SWB was higher among females (z = -3.02, p = 0.003), Masters and PhD holders [H(7, n = 382) = 16.26, p = 0.023], and the highest income group H(10, n = 382) = 21.49, p = 0.018. PWB was significant among 30 to 44 year olds [H(9, n = 382) = 20.65, p = 0.014] and postgraduates [H(7, n = 382) = 30.88, p < 0.001]. Lastly, NES were significant among 60 and 65 year olds [H(9, n = 382) = 45.21, p < 0.001], low educational level [H(7, n = 382) = 15.23, p = 0.033], and low household income [H(10, n = 382) = 27.18, p = 0.002].

DISCUSSION

This study aimed to develop a social and psychological well-being index for Malaysians and explore its links with demographic indicators. Although the study was conducted in the post-pandemic phase, results showed no decline in well-being aligning with Geprägs et al. (2022), who found no difference in quality of life due to the pandemic circumstances. However, this may be due to the sample's high education and high income backgrounds.

Our findings indicated higher SWB among females, higher educational levels, and higher household income. This aligns with studies in Kenya (Thuku, 2022), Australia (Povey et al., 2016), and Malaysia (Isa & Ahmad, 2022). Our findings may suggest that respondents with higher educational attainment are more knowledgeable about the importance of social factors such as the healthcare system and transportation. Higher income and education contribute to better access to housing, healthcare, and social connections (Livingston et al., 2022).

Furthermore, our results presented significant differences in PWB among middle-aged group individuals and those with higher education. As income increases with age, life satisfaction tends to improve (Bartram, 2021), while older individuals often experience lower PWB (Pourebrahim & Rasouli, 2019). In Nigeria, younger, educated teachers reported lower well-being (Okeke et al., 2024). Compared to our results, this may suggest that younger individuals are still developing their coping strategies. Accordingly, NES were higher among the older individuals, those with lower education, and lower income. In contrast to our findings, a Canadian study found no significance between educational attainment and household income on PWB (Varin et al., 2024).

CONCLUSION

Our findings may contribute to the development of the well-being literature in Malaysia, particularly with regard to the importance of SWB and PWB. Our assessment of demographic characteristics in relation to well-being provides new insights indicating how education and income are essential elements in promoting SWB and PWB. Therefore, these data may be valuable for policymakers seeking to conduct interventions aimed at improving the SWB and PWB of the Malaysian population as a whole, as well as particular target groups.

ACKNOWLEDGEMENT

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Exploring the Influence of Brand Experience on Value Co-Creation and Loyalty Among Consumer Cooperative Members

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ABSTRACT

Over the past few decades, researchers have increasingly focussed on value co-creation behaviour, especially in the retail sector, where it is seen as a key driver for growth and long-term sustainability. Although earlier studies have predominantly concentrated on uncovering the elements and key drivers of the co-creation of value, comparatively limited scholarly attention has been devoted to examining its influence on various dimensions of relational marketing. This paper introduces a conceptual framework for value co-creation behaviour, SD-Logic and ELT, as the underpinning theories. The framework highlights the significance of cooperative brand experience and member loyalty. However, a significant gap exists in the literature concerning the examination of this relationship within the specific context of consumer cooperatives, particularly about brand experience as the moderating variable. In addition, the practical application of these constructs concentrating on cooperative contexts in emerging economic settings has received limited scholarly attention and remains inadequately understood. Therefore, it is crucial to examine value co-creation behaviour in relation to cooperative brand experience and member loyalty, specifically contextualided from the consumer cooperatives context in developing market environments

Keywords: Cooperatives brand experience, experiential learning theory, loyalty, SD-logic, value co-creation behaviour

INTRODUCTION

According to Grönroos (2012), value co-creation refers to the joint efforts of parties engaged in active collaboration, aimed at increasing the value gained by one or both participants. A core objective of business organisations is to create customer value

by delivering products and services that correspond to the needs and expectations of their customers. Value creation is a key indicator of business performance, as it plays a vital role in fostering customer satisfaction and loyalty (Yi, 2014). The idea of it becomes more widely recognised and important, highlighting the need for a consistent and shared interpretation among scholars and industry professionals (Rubio et al., 2020). While much research has focussed on the effects of rational elements (such as trust from customer) and emotional components (like affective commitment) on customer loyalty, there has been insufficient attention on interactional elements, including value co-creation, as drivers of loyalty (Iglesias et al., 2020). Kaufmann et al. (2016) found that active customer participation in co-creation within brand communities enhances brand loyalty. Additionally, Egan (2011) emphasised that delivering superior value and engaging customers in the value creation process promotes retention and loyalty, as such involvement enables customers to identify new opportunities and establish stronger connections with service providers, thereby decreasing the risk of relationship dissolution. These insights highlight the influential role of co-creation in fostering customer loyalty.

PROBLEM STATEMENT

Member loyalty is crucial for the survival and sustainability of cooperatives. Cooperatives must consistently nurture and strengthen member loyalty by fostering strong relationships, gaining deeper insights into member needs, and cultivating commitment and satisfaction toward the cooperative (Maghfiroh & Rusdarti, 2016). A cooperative is a business or organisation owned and run by a group of people who work together to meet their shared needs or goals. The success of cooperatives in delivering mutual benefits largely depends on the active involvement and commitment of their members. A major challenge faced by most of the cooperatives today is sustaining consistent member engagement and support, which is closely linked to the concept of member loyalty (Malik et al., 2025). Harisudin et al. (2020) highlighted several critical challenges confronting cooperatives, such as heightened market competition, declining membership rates, and weak member loyalty. These factors were identified as major barriers to effective cooperative performance. Unlike conventional business models, cooperatives depend heavily on their members for both operational success and long-term viability, given their unique reliance on active member involvement and sustained support (Othman et al., 2012).

Furthermore, Sleilati and Stefier (2021) reported that brand experience does not have a strong impact on the link between online value co-creation behaviour and customer loyalty. In contrast, previous research by Khan and Hussainy (2017) and Nysveen and Pedersen (2014) indicated a positive association between online brand experience and customer loyalty in digital environments. Supporting this, according to Iglesias et al. (2020), the impact of brand experience on customer loyalty is contingent upon the presence

of a strong emotional bond or affective commitment between the customer and brand. A strong emotional connection with a brand can substantially strengthen the impact of online brand experience on the development of loyalty from the customer. However, Sleilati and Stefier (2021) found no strong evidence of a link between brand experience and customer loyalty. These mixed results suggest that more research is needed to better understand the relationship between the two variables. Therefore, this study aims to explore how brand experience may influence or modify the relationship between key factors within the context of cooperatives.

Research Questions

RQ 1:   Does value co-creation behaviour (member participation and member citizenship) affect loyalty?

RQ 2:   Does cooperative brand experience moderate the effect of value co-creation behaviour (member participation and member citizenship) on loyalty?

Conceptual Framework and Hypotheses
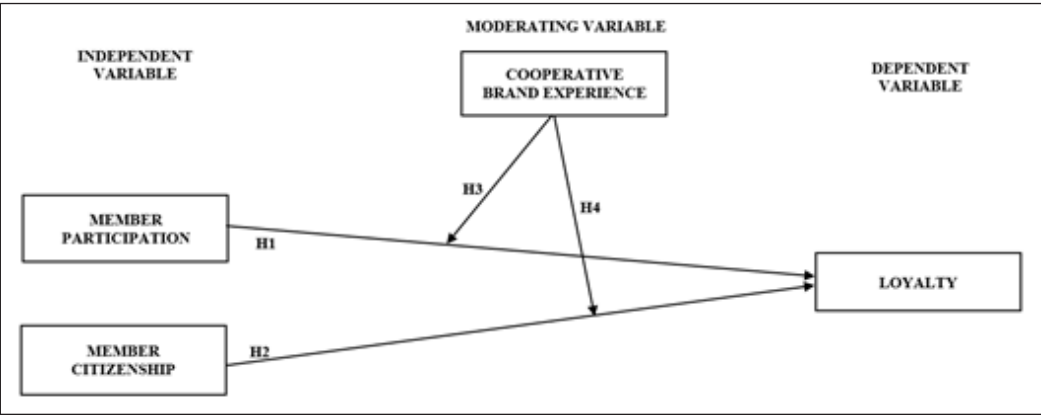
Figure 1. Conceptual framework adapted by Yi (2014) and Kolb and Kolb (2015)

Given the inconsistent findings in previous research, the following hypotheses have been formulated:

H1:   There is a significant relationship between Member Participation and Loyalty.

H2:   There is a significant relationship between Member Citizenship and Loyalty.

H3:   Cooperatives Brand Experience moderates the relationship between Member Participation and Loyalty.

H4:   Cooperatives Brand Experience moderates the relationship between Member Citizenship and Loyalty.

METHODOLOGY

This study was targeted to members of consumer cooperatives located in different parts of Sarawak. This study utilised purposive sampling, guided by predetermined selection criteria. Participants needed to be cooperative members who regularly buy or use products and services from consumer cooperatives. Sarawak was chosen as the study location because of its diverse ethnic background and the relatively low number of cooperatives, highlighting the importance of cultural differences among cooperative members. Furthermore, Sarawak holds the position of being the tertiary-largest contributor to Malaysia's overall economic output (Lee & Voon, 2022) and its slower development of the cooperative movement compared to other states further highlights the importance of studying this context. Meanwhile, consumer cooperatives become the fourth-largest contributors to the national economy (Zakaria et al., 2022). Questionnaire distribution and data collection was carried out concurrently through both physical and online platforms, with the same enumerators assigned to administer both methods. To ensure the robustness of the findings and mitigate the risk of response errors, this study recruited approximately 250 respondents. A power analysis done earlier with G*Power showed that a minimum number of participants for this study is 129. The data was analysed using the IBM SPSS Statistics and SmartPLS to ensure comprehensive statistical and structural equation modelling. Upon completion of the data collection, the researcher undertook a data screening and cleaning process to reduce potential errors such as missing values and inconsistencies. The data wereinput into SPSS and frequency analyses were carried out to detect and manage missing responses. Questionnaires with more than 15% missing data were excluded from the analysis. For cases with scattered missing values, the Expected Maximisation (EM) algorithm was employed to estimate and impute the missing data based on the relationships among observed variables. Prior to conducting data analysis using the Structural Equation Modelling (SEM), outliers defined as extreme responses to individual items or across the entire dataset were identified and addressed in accordance with the guidelines of Hair et al. (2014). Outlier detection was based on the standardised latent variable scores exceeding a threshold of 3. While most problematic responses were removed, outliers were generally retained unless compelling evidence indicated that they were highly influential and not representative of the target population (Hair et al., 2006). A reliability test were conducted to assess the accuracy and consistency of the measurement instruments. This method facilitates the verification of whether measurement items effectively capture the intended constructs and appropriately differentiate between constructs that are conceptually related and those that are distinct (Hair et al., 2017).

CONCLUSION

This research offers useful insights for Malaysia's cooperative movement by showing how important value co-creation behaviour is for the success and sustainability of cooperatives. It also helps create a clear framework tounderstand value co-creation in consumer cooperatives, giving both useful ideas and practical ways to apply the model in real-life situations. The framework presented highlights on how co-creation activities influence member loyalty, providing practitioners with a useful guide to strengthen and better tailor their marketing approaches. The study further highlights the essential importance of member participation as fundamental aspects of value co-creation, demonstrating their contribution in enhancing loyalty within consumer cooperatives.

ACKNOWLEDGEMENT

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Sustained Adoption of Online Food Delivery Applications: Insights from Northern Malaysia

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ABSTRACT

In Malaysia, online food delivery (OFD) services have seen a surge in popularity due to the convenience they offer consumers. This research explores the factors influencing users' ongoing intention to use online food delivery applications (OFDAs), specifically focussing on the customers' perspectives in the northern region of the country. Utilising a quantitative methodology, data were gathered through questionnaires from 477 participants. The analysis was conducted using the Partial Least Squares (SmartPLS). The findings revealed that factors such as performance expectancy, social influence, hedonic motivation, habit, and information quality play a significant role in shaping continuous usage intentions. These insights may also be applicable to other regions, providing a broader understanding of what drives OFDA adoption.

Keywords: Continuous intention, online food delivery, online food delivery applications

INTRODUCTION

Online Food Delivery (OFD) services facilitate food orders through websites or mobile apps, linking customers with food service providers (Ray, 2019). The rise in OFD adoption is attributed to the convenience and accessibility offered, especially during the COVID-19 pandemic (Müller, 2022). In Malaysia, 79% of respondents reported using OFDs during the pandemic due to dining restrictions (Tan et al., 2021). Even in the endemic phase, customers continue using OFDAs, highlighting a shift in behaviour towards digital convenience.

Food delivery applications (FDAs) represent a subset of online-to-offline (O2O) services, providing various features such as search filters, live tracking, and multiple payment options (Alalwan, 2020; Rabaa'i et al., 2022). This study examines the factors that influence the continuous intention to use online food delivery applications (OFDAs) in the northern region of Malaysia, with particular attention to critical issues such as technological literacy, trust, and service quality.

LITERATURE REVIEW

This study utilises the Unified Theory of Acceptance and Use of Technology (UTAUT) framework to predict user behaviour in the context of technology adoption. Additionally, trust and information quality are considered to examine their influence on continuous intention.

Numerous studies have highlighted the significance of performance expectancy in technology adoption, suggesting that individuals are more likely to adopt a technology when they believe it will enhance their efficiency and convenience (Alalwan, 2020). Effort expectancy is also a critical factor, as technologies that are perceived to be user-friendly and easy to navigate are more likely to encourage sustained usage (Gupta, 2020). Social influence, particularly from peers and family members, has been shown to impact technology acceptance, as individuals tend to conform to group norms when making technology adoption decisions (Ye-Eun et al., 2017).

Furthermore, hedonic motivation, or the enjoyment derived from using technology, has been highlighted as a significant driver of continuous use. Habit formation, wherein users develop a routine around using OFDAs, further reinforces continuous intention. Information quality is another critical determinant, as accurate and timely information enhances trust and satisfaction with the service (Koiri et al., 2019). Trust, in particular, has been extensively studied, with findings indicating that privacy concerns and perceived security significantly influence customers' willingness to share personal information and make online transactions (Hu & Chen, 2018).

Continuous intention is influenced by habit, price value, performance expectancy, information quality, facilitating conditions, effort expectancy, social influence, hedonic motivation, and trust. Gender is introduced as a moderating variable. Unlike previous studies, this research excludes age and experience as moderators, focussing on a cross-sectional analysis.

METHODOLOGY

A quantitative, cross-sectional design was employed, with data collected via a Google Form distributed to respondents in Perak, Perlis, Kedah, and Pulau Pinang. A total of 477 participants completed the questionnaire, which comprised two sections: Section A gathered

demographic data, while Section B focussed on OFDA usage. Respondents' perceptions were measured using a 7-point Likert scale (Hussey & Hussey, 1997), and the data were analysed using the SmartPLS.

Purposive sampling was employed to ensure the inclusion of individuals with prior experience using OFDAs, aligning the sample with the study's objectives. Respondents assessed their experiences based on ease of use, perceived usefulness, social influence, and overall satisfaction. The cross-sectional design enabled data collection at a single point in time, providing a comprehensive overview of user perceptions and behaviours.

RESULTS AND DISCUSSION

Demographic Details

The sample consisted of 62.5% females and 37.5% males, with Malays forming the majority (84.9%), followed by Chinese (6.5%), Indians (4.4%), and other ethnicities (4.2%). Most respondents were aged 21-25 (60.0%) and held a Bachelor's degree (47.0%). FoodPanda (55.3%) and GrabFood (43.4%) were the most preferred platforms.

Assessment of the Measurement Model

The outer model confirmed content, convergent, and discriminant validity. Factor loadings exceeded the recommended 0.50 threshold (Hair et al., 2014), and composite reliability ranged between 0.945 and 0.988. The average variance extracted (AVE) values surpassed the 0.50 benchmark, ensuring construct validity.

Hypothesis Testing

Performance expectancy (H1), social influence (H3), hedonic motivation (H5), habit (H7), and information quality (H8) significantly influenced continuous intention ($p < 0.05$). However, effort expectancy (H2), facilitating conditions (H4), price value (H6), and trust (H9) showed no significant relationship. Gender did not moderate any of the proposed relationships (H10-H13).

CONCLUSION

The findings reveal that continuous intention to use OFDAs is shaped by performance expectancy and social influence, along with hedonic motivation, habitual use, and the quality of information provided. The absence of gender moderation suggests uniform behaviour across genders in the northern Malaysia. For practitioners, enhancing system performance, usability, and awareness can encourage continuous use. Future studies should explore additional variables, expand geographical scope, and consider qualitative approaches for deeper insights.

ACKNOWLEDGEMENT

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Navigating Diversity: The Effects of Multicultural Workforce on Employee Performance in Malaysian Private Universities

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ABSTRACT

Workforce diversity plays a critical role in fostering an inclusive and productive workplace, with the potential to enhance innovation, performance, and overall employee satisfaction. In the context of Malaysian private universities, this paper explores the impact of workforce diversity on employee performance, specifically how diverse backgrounds, experiences, and perspectives influence academic outcomes. As higher education institutions increasingly prioritise inclusivity, it is essential to understand the effects of various dimensions of diversity such as ethnicity, gender, age, and academic discipline on teamwork, innovation, and productivity among academic staff. This paper reviews existing theoretical frameworks and proposes methodologies for investigating the relationship between workforce diversity and employee performance in higher education settings. While diversity can stimulate creativity and improve problem-solving, it may also present challenges related to communication and integration within teams. The paper concludes with recommendations for cultivating an inclusive organisational culture that leverages diversity to enhance employee performance in Malaysian private universities.

Keywords: Employee performance, organisational culture, private universities, workforce diversity

INTRODUCTION

Workforce diversity is a key driver of success and innovation in organisations, especially in higher education. It encompasses differences in age, gender, ethnicity, and education, contributing to adaptability and competitiveness. Research shows that diversity enhances employee performance

by fostering innovation, problem-solving, and job satisfaction. However, its impact depends on organisational culture, leadership, and job nature.

In Malaysian private universities, workforce diversity is crucial due to the country's multicultural society. These institutions benefit from diverse perspectives but require proper management to maximise advantages. Despite its importance, limited studies focus on diversity's impact in academia, with most research targeting corporate settings. As competition among universities grows, managing diversity effectively is vital for improving global rankings, attracting international students, and enhancing institutional performance.

PROBLEM STATEMENT

Workforce diversity is increasingly recognised as a key factor in improving organisational performance and fostering inclusivity, particularly in education. It encompasses differences in age, gender, ethnicity, and educational background, which drive creativity and innovation but may also lead to conflict and misunderstandings that impact employee performance. Despite its importance, research on workforce diversity in Malaysian private universities remains limited.

The Malaysian private universities operate in a unique sociocultural environment with diverse ethnicities, languages, and cultural practices. While diversity enhances global competitiveness, its impact on employee performance in these institutions is not well understood, as most studies focus on corporate settings. The nature of teaching and research, combined with hierarchical structures, may influence how diversity affects performance (Mushtaque et al., 2021).

Organisational culture plays a crucial moderating role in managing diversity (Thomas & Plaut, 2008). A culture that values inclusivity fosters collaboration and enhances performance, while a lack of inclusivity can lead to conflict and inefficiencies. Beyond visible differences such as gender and ethnicity, factors like age and educational background also affect workplace dynamics (Abdullah et al., 2023).

This study aims to fill the knowledge gap by exploring workforce diversity's impact on employee performance in the Malaysian private universities and examining organisational culture as a moderating factor. The findings will offer insights to university administrators in creating an inclusive and high-performing academic environment, contributing to broader discussions on diversity management in higher education.

RESEARCH QUESTIONS

This study examines how different dimensions of workforce diversity—age, gender, ethnicity, and educational background impact employee performance in the Malaysian private universities. It also explores the moderating role of organisational culture in these relationships.

Hypotheses:

- **H1:** Age diversity influences employee performance.

- **H2:** Gender diversity influences employee performance.

- **H3:** Ethnic diversity influences employee performance.

- **H4:** Educational background diversity influences employee performance.

- **H5a-H5d:** Organisational culture moderates the relationship between each diversity dimension and performance.

This research provides insights for university administrators in managing diversity effectively to enhance institutional performance and academic excellence. The results for path coefficient are shown in Figure 1.
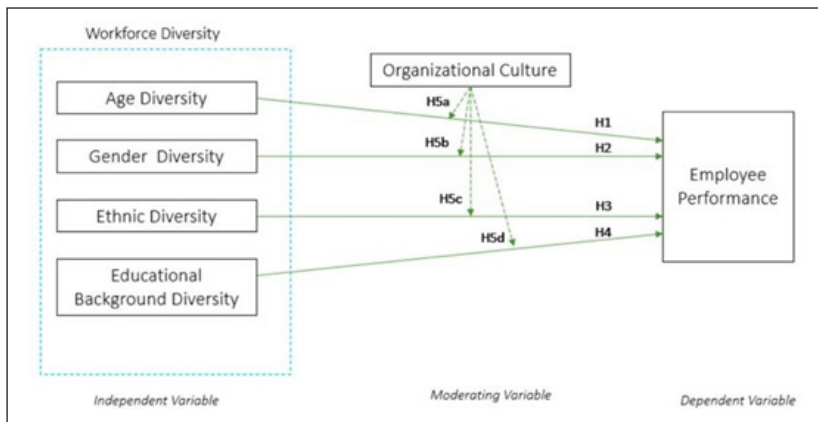
Figure 1. Conceptual framework of the impact of workforce diversity on employee performance

CONCLUSION

This study is grounded in the Social Identity Theory to examine how workforce diversity such as age, gender, ethnicity, and educational background affects employee performance in the Malaysian private universities. Organisational culture is explored as a moderating factor to enhance the positive effects of diversity.

ACKNOWLEDGEMENT

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Large Firms and Deflating Earnings Strategy: Empirical Evidence from Malaysia

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ABSTRACT

Earnings management can be practice through inflating or deflating the firm's earnings. This research investigated the inclination of large firm on deflating earnings as one of the earnings management strategies among Malaysian public listed firms. This quantitative study utilised data of 492 public listed firms from 2014 to 2021, analysed using the Fixed Effects Model. Results revealed that larger firms often inclined to be involved in earnings manipulation, particularly in deflating earnings. This result is supported by the Political Costs Theory and Political Power Theory. The result of the study makes a significant contribution to regulatory bodies, such as the Securities Commission, which needs to strengthen accounting regulations and improve supervision among large, listed firms. This can reduce the activity of either inflating or deflating the reporting of earnings that contributes to the manipulation of financial reports by managers to achieve their personal opportunistic objectives or the company as a whole.

Keywords: Income deflating, income inflating, large-listed firms, political costs theory, political power theory

INTRODUCTION

Earnings management occurs when managers use discretion in structuring transactions due to the flexibility in accounting rules. For example, the accrual principle which provides opportunities for managers to modify the facts of the company's actual financial condition by either inflating or deflating the earnings (Beneish, 2001).

Why firm size remains the area of interest in this study is due to conflicting previous findings related to determining suitable underlying theories as well as the proxies and measurements of firm size (Aljughaiman et al., 2023). Yet, there is still insufficient evidence to support the relationship between firm size and earnings management from the integration of Political Costs and Political Power Theory perspective. Hence, there is a lack of studies that specifies EM strategy (inflate or deflate) in Malaysia except Abdullah (2022) whom used a different sample. The research question is "Does firm size influence EM strategy?" Thus, the objective of this study is to investigate the EM strategy (inflate or deflate) among large firms.

MODELS, METHODS, AND MATERIALS

This study utilised 492 Bursa Malaysia listed firms across 11 types of industries from a period of 2014 to 2021, with completed information on discretionary accruals and market capitalisation information. The residual value discretionary accruals (DACC) is utilised to test whether the EM is decreasing (deflate) or increasing (inflate) (Hribar & Nichols, 2007). The model of study is shown by Model 1.

$$
\begin{aligned}
DACC \;=\; & \beta_1 SIZE_{it} + \beta_2 ROE_{it} + \beta_3 DTE_{it} + \beta_4 GROWTH_{it} + \beta_5 CIR_{it} \\
& + \beta_6 ATO_{it} + \beta_7 LOSS_{it} + \beta_8 BOARD_{it} + \beta_9 INDEP_{it} + \beta_{10} AFEE_{it} \\
& + \beta_{11} PCON_{it} + \beta_{12} ELECT_{it} + \varepsilon_{it}
\end{aligned}
$$
[Model 1]

Where DACC=Residual value of Discretionary accruals; FSIZE=Market capitalisation in natural log and in robustness check, measured by dummy variable 1=large listed (> RM2 billion market capitalisation), 0=small listed (<RM2 Billion of market capitalisation); ROE=Return on equity , calculated as Net Income divided by Total Equity; DTE=Leverage calculated as Debts to Total Equity ratio; SG=Sales Growth calculated as Current Year Sales – Previous Year Sales/Previous Year Sales; CIR=Capital intensity measured by Total Assets divided by Total Sales; ATO=Assets turnover ratio measured by Total Sales divided by Total Assets; LOSS=Dummy variable for current year loss (1= loss's year, 0=otherwise); BSIZE=Board size (number of board of directors); BIND=Board independence (percentage of independent directors on board); AUDFEE=Audit expenses paid to auditors measured in Log RM; PCON=Political connection measured a scale of 1 to 4 (number of connections to a politician that reflect the degree of connection 1 with 1 connection and so on); ELECT=Dummy for year 2018 during which GE14 took place. (1=2018, 0=otherwise)

RESULTS AND DISCUSSIONS

In Table 1, as for the column of the main analysis, the firm size was proxied by a dummy variable using 1 = large, listed, and 0 = small, listed. Results revealed that there is a

negative association between firm size and DACC (proxied for earnings management) at a significant level of 1%. This shows that the larger the firm's size is, the more negative the discretionary accruals, which signify earnings management by deflating their earnings. Thus, the hypothesis of this study is verified. It is constant with the study by Delgado et al. (2023). As for column of the robust analysis, this study also discovers that there is a negative association between firm size (proxied by log market capitalisation) and DACC. The main result is confirmed by this robust analysis.

Table 1
Fixed effects model

	Main	Robust
Constant	0.237***	0.777***
	-0.0555	-0.0803
FSIZE (LgMCap)		-0.0319***
		-0.0033
FSIZE (Dummy)	-0.0337***	
	-0.0067	
ROE	0.0277	0.116***
	-0.0246	-0.0255
DTE	0.0056	0.0003
	-0.006	-0.0054
SG	0.0721***	0.0754***
	-0.0057	-0.0056
CIR	0.00256*	0.00352***
	-0.0014	-0.0013
ATO	0.0096	0.0108*
	-0.0072	-0.0066
LOSS	-0.00737**	-0.00897***
	-0.0031	-0.0032
BSIZE	-0.0006	-0.000711*
	-0.0004	-0.0004
BIND	0.0101	0.0095
	-0.0157	-0.0144
AUDFEE	-0.0162***	-0.0101***
	-0.0044	-0.0039
FPOL	-0.00701**	-0.00570*
	-0.0032	-0.003
ELECT2018	-0.00667***	-0.00779***
	-0.0019	-0.0019
R-squared	0.105	0.17
F-Statistic	24.29***	27.10***
No. of observation	3936	3936

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

CONCLUSION

The larger the firm is, the greater the inclination to deflate their earnings. The reason is that larger firms are subject to more government regulations and high public visibility which will affect wealth transfer. As a result, large firms will exploit their lobbying power to reduce political risks and risk of transferring their wealth to other parties (Salamon & Siegfried, 1977; Stickney & McGee, 1982). This study contributes two main aspects. First, it enriches the literature on EM based on the Political Cost Theory and Political Power Theory as the substituting theory. Other than that, it provides guidance to regulatory bodies to notice that all managers have opportunistic behaviour towards inflating or deflating their earnings. Future studies are recommended to explore EM during the events of crises, pandemics, or elections.

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Digital Dependencies: The Impact of Online Gaming Addiction on Mental Health and Social Well-Being Among Malaysian Youths

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ABSTRACT

The rising prevalence of online gaming addiction among Malaysian adolescents raises concerns about its psychological, academic, and social effects. This study aims to investigate how attitudes towards gaming, subjective norms, and perceived behavioural control contribute to addiction by utilising the Theory of Planned Behaviour (TPB). A quantitative survey was conducted with 750 adolescents (aged 13-18) from five secondary schools in Selangor, using validated instruments such as the Internet Gaming Disorder Scale and DSM-5 criteria. Statistical analyses revealed significant relationships ($p < 0.05$) between gaming addiction and positive attitudes ($r = 0.45$), subjective norms ($r = 0.38$), and low perceived behavioural control ($r = -0.45$). Chi-square tests indicated significant negative associations ($p < 0.05$) between higher levels of gaming addiction and academic performance ($x^2 = 8.12$) and family relationships ($x^2 = 6.45$). These findings highlight the influence of internal attitudes and social pressures on addiction, particularly among adolescents struggling with self-regulation. While significant correlations were found, this study does not establish causality. The results underscore the urgent need for targeted interventions, such as integrating digital literacy into school curricula and enhancing family communication, to address gaming addiction and promote healthier adolescent development.

Keywords: Academic performance, adolescents, good health and well-being, mental health, online gaming addiction, psychological disorder syndrome, quality education, theory of planned behaviour

INTRODUCTION

The rise of online gaming addiction among Malaysian adolescents is a significant public health concern. While gaming can improve digital literacy and social engagement, excessive use may lead to mental health issues, academic decline, and strained

family relationships (Cash et al., 2023). Globally, 10-15% of adolescent gamers exhibit addiction symptoms, a trend reflected in Malaysia (Chin & Chow, 2023). However, there is limited localised research, as most studies focussed on Western populations, hindering the understanding of cultural influences on gaming behaviour (Parrott et al., 2020). Existing studies mainly addressed mental health impacts, with few examining long-term educational effects (Subbiah & Ibrahim, 2011) or tailored interventions for Malaysian youth. Table 1 highlights these gaps in relation to the TPB.

Table 1

Summary of key studies on gaming addiction, TPB constructs, and gaps

Author(s)	Key Findings & TPB Construct (**)	Gap in Literature
Silva & Diaz, 2023	Gaming addiction linked to depression and anxiety. **(Attitude)	Lacks cultural context in non-Western settings.
Veldkamp et al., 2020	Problematic gaming tied to subjective norms. **(Subjective Norms)	Does not address long-term educational impacts.
Hussein et al., 2019	CBT effective but overlooks social factors. **(Subjective Norms)	Needs interventions considering social influences in Malaysia.
Nadeak, 2021	Positive attitudes increase addiction likelihood. **(Attitude)	Lacks localised research on cultural attitudes in Malaysia.
Schettler et al., 2022	Low self-control predicts addiction. **(Perceived Control)	Does not explore cultural variations in perceived control.
Hooshyar et al., 2021	Subjective norms maintains gaming behaviors. **(Subjective Norms)	Fails to consider family dynamics in addiction.
Novo et al., 2024	CBT shows short-term efficacy. **(Perceived Control)	Lacks longitudinal studies on intervention effectiveness.

Integrating the TPB was crucial in understanding gaming addiction, providing a framework to analyse how attitudes, subjective norms, and perceived behavioural control influenced gaming behaviours. This study aimed to address these gaps and offer insights to inform policies and support systems for Malaysian youth.

METHODOLODY

This quantitative study examined online gaming addiction among 750 Malaysian adolescents aged 13-18 from five selected secondary schools in Selangor. These samples were selected via the stratified random sampling (Hughes et al., 2023). A structured questionnaire assessed attitudes towards gaming, subjective norms, and perceived behavioural control based on the TPB. Gaming addiction was measured using the Internet Gaming Disorder Scale (IGDS), aligned with DSM-5 criteria, focussing on loss of control, prioritisation of gaming, and continued gaming despite negative consequences (Culliford & Bradbury, 2020). The study tested several hypotheses:

H1:   Adolescents with positive attitudes towards gaming exhibited higher levels of gaming addiction.

H2:   Adolescents experiencing higher subjective norms demonstrated increased levels of gaming addiction.

H3:   Adolescents with lower perceived behavioural control experienced higher levels of gaming addiction.

Additionally, the study explored two outcome-based hypotheses:

H4:   Gaming addiction negatively impacted academic performance.

H5:   Gaming addiction negatively influenced family relationships.

Data analysis was performed using the SPSS software, applying Pearson correlation, t-tests, and Chi-square tests. Significance was determined at a threshold of $p < 0.05$. Ethical guidelines were strictly adhered to, including informed consent from participants and ensuring their anonymity.

ANALYSIS AND RESULTS

Figure 1 summarises the demographic characteristics and gaming preferences of the respondents. The analysis revealed that most participants were male (54%), aged 13-15 (60%), and 73% gamed daily, primarily on mobile devices (65%). Significant positive correlations were found between positive gaming attitudes ($r = 0.45$, $p = 0.003$) and subjective norms ($r = 0.38$, $p = 0.001$) with gaming addiction, while perceived behavioural control negatively correlated with addiction ($r = -0.45$, $p = 0.002$). Gaming addiction also significantly affected academic performance ($x^2 = 8.12$, $p = 0.000$) and family relationships ($x^2 = 6.34$, $p = 0.004$), with all results statistically significant at $p < 0.05$.
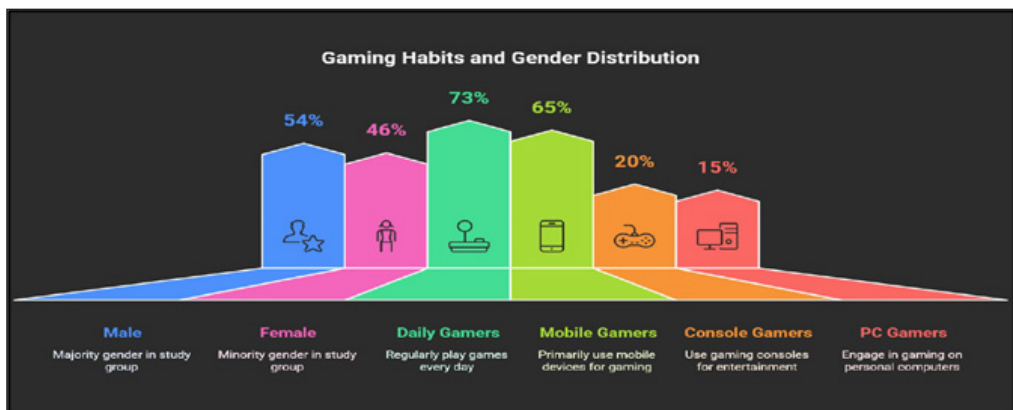
Figure 1. Results on gaming habits and gender distribution

The statistical analyses tested five hypotheses based on the TPB, as summarised in Table 2. All hypotheses were supported with statistically significant results ($p < 0.05$), demonstrating clear relationships between gaming addiction, attitudes, subjective norms, perceived behavioural control, academic performance, and family relationships.

Table 2
Summary of hypothesis testing and statistical results

Hypothesis	Test Applied	Statistic Value	p-value	Significance	Result
H1: Positive attitudes towards gaming are positively associated with higher gaming addiction levels.	Pearson Correlation	r = 0.45	0.003	Significant ($p < 0.05$)	Supported
H2: Subjective norms significantly predicts gaming addiction.	Pearson Correlation	r = 0.38	0.001	Significant ($p < 0.05$)	Supported
H3: Lower perceived behavioural control correlates with higher levels of gaming addiction.	Pearson Correlation	r = -0.45	0.002	Significant ($p < 0.05$)	Supported
H4: High gaming addiction levels negatively impact academic performance.	Chi-square Test	$x^2 = 8.12$	0.000	Significant ($p < 0.05$)	Supported
H5: Gaming addiction negatively influenced family relationships	Chi-square Test	$x^2 = 6.34$	0.004	Significant	Supported

The analysis revealed significant correlations between positive gaming attitudes, subjective norms, and low perceived behavioural control, all linked to higher gaming addiction levels (Table 2). These findings support the TPB, showing that adolescents with favourable gaming attitudes and weaker self-regulation are more prone to addiction (Almeida & Simoes, 2019). Gaming addiction also correlates with lower academic performance and strained family relationships, highlighting the need for targeted interventions like digital literacy programmes and parental involvement to enhance behavioural control and address external influences.

CONCLUSION

This study investigated online gaming addiction among Malaysian adolescents using the TPB. It is found that positive gaming attitudes, social influences, and low perceived control are linked to higher addiction levels, which negatively impact academic performance and family relationships. To promote healthier gaming habits, the study recommends digital literacy programmes, parental involvement, and peer support. This research enhances

understanding of gaming addiction and provides insights for educators and policymakers, suggesting future studies explore long-term effects and cultural differences.

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Reviving Oral Traditions: Digital Preservation of Asian Indigenous Folktales Through the *Nusantara* E-Book

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ABSTRACT

This study examines the *Hidden Tales of Nusantara* e-book as a digital tool for preserving Indigenous folktales and promoting cultural education amid the decline of oral traditions in Southeast Asia. Using a quantitative design with online questionnaires, data was collected from parents, educators, and students to assess the e-book's usability, cultural relevance, and engagement potential. Findings reveal that the e-book is effective in teaching moral values, user-friendly, and well-suited for children, with most participants recognising its value in making cultural stories accessible to younger audiences. Despite its strengths, issues of digital accessibility in rural areas remain a concern. The study concludes that digital platforms like this e-book offer promising solutions for cultural preservation and education, recommending future efforts to improve interactivity and expand access in underserved regions.

Keywords: Cultural heritage, digital preservation, digital storytelling, indigenous folktales, Southeast Asia

INTRODUCTION

Oral traditions have long been central to preserving cultural heritage, but globalisation and digital media have contributed to their decline, especially in Asia's diverse Indigenous communities (Wong & Naqvi, 2023). Digital technology offers new opportunities to safeguard these narratives, with e-books like the *Hidden*

Tales of Nusantara using interactive storytelling to engage younger audiences and bridge tradition with modern formats (Bauman & Briggs, 2020; UNESCO, 2021). In Malaysia, government-led digitisation efforts reflect this shift, making digital storytelling a key tool in cultural preservation (MCMC, 2022). However, concerns over authenticity and access remain, emphasising the need for collaboration with local communities (Smith & Watson, 2021). This study aims to examine how the *Hidden Tales of Nusantara* e-book supports Indigenous folktale preservation, boosts engagement among parents, educators, and students, and contributes to cultural education and awareness for future generations.

LITERATURE REVIEW

Oral tradition—the transmission of knowledge, history, and cultural values through storytelling and performance—has long been central to preserving Indigenous identity, especially in the Asian societies. In Malaysia, communities like the Orang Asli and Iban rely on folktales to convey moral values and collective wisdom (Bauman & Briggs, 2020). With globalisation threatening these traditions, digital technologies such as e-books and multimedia archives offer new opportunities to document and share oral narratives across generations and audiences (Smith & Watson, 2021). The *Hidden Tales of Nusantara* e-book exemplifies this potential by using visuals, interactive quizzes, and multimedia elements to make Indigenous stories engaging and accessible. Theoretical frameworks like the Bourdieu's Cultural Capital Theory (Bourdieu, 1986) and Rogers' Diffusion of Innovations Theory (Rogers, 2003) help explain the importance and adoption of such digital tools. However, while Malaysia has made strides in digitising cultural assets, research on the long-term effectiveness of digital storytelling in preserving intangible heritage and maintaining youth engagement remains limited. The table summarises past studies related to the digital preservation of Asian Indigenous folktales through digital platform strategies (Table 1):

Table 1

Past studies related to the preservation of Asian indigenous folktales

Authors	Year	Method	Main Findings
Wong & Naqvi	2023	Case Study Analysis	Indigenous folktales enhance cultural relevance in ESL learning, increasing student engagement.
Smith & Watson	2021	Conceptual Framework	Folktales bridge cultural gaps in language learning by embedding cultural identity into lessons.
Bauman & Briggs	2020	Thematic Review	Storytelling fosters empathy and deeper cultural understanding in language learners.
Sa'ad et al.	2023	Mixed-methods Approach	Indigenous folktales offer a creative avenue for ESL learning, improving comprehension and engagement.

METHODOLOGY

This study employs a quantitative research design to explore how digital platforms can be used to preserve Asian Indigenous folktales, focussing on the perceptions of parents, educators, and students. The population comprises individuals who actively engage with digital tools for cultural and educational purposes. A purposive sampling technique was employed to select 30 participants, equally divided among parents, educators, and students, to provide balanced perspectives. Data was collected through an online questionnaire focussed on usability, engagement, and the effectiveness of digital platforms in fostering cultural awareness, with responses collected over one month. Quantitative data were analysed using descriptive statistics, and all responses were measured on a 5-point Likert scale. To ensure reliability, the Cronbach's alpha was calculated, with a value of 0.70 or higher was considered acceptable (Tavakol & Dennick, 2011).

RESULTS AND DISCUSSION

The Results and Findings section examines the students' attitudes towards the usability of the e-book and their involvement in enjoyable English language activities.

Usability of the e-Book

The findings provide valuable insights into the participants' perceptions of the e-book's effectiveness, language suitability, usage frequency, preference for digital storytelling, and the importance of preserving folktales. The e-book was perceived as highly effective in teaching moral values, with a mean score of 4.5. The language and structure were well-received, with a mean score of 4.6 and low variation, suggesting alignment with the children's reading levels. However, its frequency of use varies, with a mean score of 2.9, showing that some participants intend to use it frequently, while others plan occasional use. Preferences for digital storytelling are mixed, reflected in the neutral mean score of 3.3. There is a strong consensus on the importance of preserving folktales, with a high mean score of 4.8. These findings highlight both the strengths of the ebook and areas for further exploration.

Perceptions Towards the e-Book

The descriptive analysis shows that students responded positively to the use of fun English activities in the e-book. The highest-rated item was "I think the fun activities help make learning English more interesting" (Mean = 4.286), followed by "I feel excited about participating in English language fun activities" and "I am motivated to improve my English skills through these activities" (Mean = 4.234). These results suggest that the interactive features of the e-book effectively support emotional engagement and motivation in learning English.

Students also expressed strong support for collaboration and autonomy in their learning. "I enjoy working with other students during the English activities" (Mean = 4.208) and "Participating in these activities helps me feel more independent in my English learning" (Mean = 4.13) indicate that the e-book promotes both peer interaction and self-directed learning. Meanwhile, statements like "I feel more confident speaking English" (Mean = 3.896) and "These activities give me a chance to take charge of my own learning" (Mean = 3.935) show that while confidence and autonomy were slightly lower, they remain important outcomes to be further enhanced.

The Pearson correlation analysis reveals strong positive relationships between the students' enjoyment of fun English activities and their learning outcomes. High correlations were observed for emotional engagement, such as "The activities that we do make me want to participate more in English class" ($r = .667$), and motivation, including "I feel that the fun activities will help me achieve my personal English learning goals" ($r = .649$). Notably, the strongest correlation was found in autonomy, with "These activities give me a chance to take charge of my own learning" ($r = .693$), indicating that enjoyable, student-centred tasks effectively enhance engagement, motivation, confidence, and independent learning.

The results underline the e-book's efficiency, adequacy of language, and cultural relevance while indicating differences between its use and common use of digital storytelling. Fun activities are positively correlated with student engagement, motivation, confidence, collaboration, and autonomy.

CONCLUSION

This study evaluated the *Hidden Tales of Nusantara* e-book as a tool for preserving Indigenous folktales and promoting cultural education. It was found effective in teaching moral values and engaging young readers, with a strong support for its suitability and accessibility. While digital platforms were widely accepted, some still preferred traditional formats, highlighting the need to balance both. Building on previous studies, this research adds insights into user experience and digital access challenges, especially in underserved areas. Grounded in the Cultural Capital and Diffusion of Innovations theories, the study affirms the e-book's value for cultural transmission and calls for further research into long-term impact and interactive features.

IMPLICATIONS OF THE STUDY

This study highlights the *Hidden Tales of Nusantara* e-book's potential as an effective digital platform in preserving Indigenous folktales and enhancing cultural education. It supports previous findings that culturally relevant digital tools can engage youth and transmit traditional values. High usability and engagement affirm its alignment with the Cultural Capital and Diffusion of Innovations theories. While the e-book bridges heritage

and technology, challenges remain in rural access and balancing digital with traditional storytelling. The study calls for inclusive infrastructure and future use of AI or VR, offering practical value for educators aiming to integrate cultural content into modern learning.

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Consumer Segmentation of Green Financial Products in Indonesia: Insights from Sociodemographic Factors

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ABSTRACT

This study investigates the segmentation of green financial products users in Indonesia based on their sociodemographic characteristics and preferences for green financial products. Utilising data from 196 respondents collected through an online survey, the research employs non-hierarchical K-means cluster analysis to identify distinct consumer segments. The findings reveal three distinct consumer groups: conservative consumers (C1), influenceable consumers (C2), and consumers interested in financial return (C3). Each segment exhibits unique investment behaviours and attitudes towards green financial products, influenced by factors such as gender, age, education, and income. The conservative group prioritises stability and avoids risk, showing little interest in green investments. The moderate group balances an interest in green investments with a moderate risk tolerance. In contrast, the high-risk group prioritises financial returns and shows a strong interest in green financial products. These insights offer valuable guidance for financial industry players and policymakers in developing targeted marketing strategies and policies to promote green investments, contributing to sustainable development and environmental conservation.

Keywords: Green financial, investment, segmentation, sociodemographic, sustainability

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INTRODUCTION

Indonesia has shown notable progress through initiatives such as the sovereign Green Sukuk and expanded green bond offerings. However, financial literacy and

inclusion remain major challenges, with green bonds and sukuk accounting for only 0.22% of the total outstanding bonds and sukuk (Tarigan, 2024). Despite an increase in the financial inclusion index for the capital market to 5.19% in 2022, it still lags behind other financial sectors, necessitating ongoing efforts (OJK, 2022). While studies have examined green investment intentions (Adhiyogo et al., 2022; Affandi & Rahmawati, 2023; Cantika et al., 2022), little attention has been given to profiling consumers based on sociodemographic variables. Regulatory reports such as the OJK's National Financial Literacy and Inclusion Survey lack detailed segmentation by financial product type, limiting insights into which population groups are more likely to adopt green financial products. This gap weakens the effectiveness of marketing strategies, policy design, and financial literacy initiatives aimed at increasing sustainable investment. Given that factors such as age, gender, income, and education influence green consumer behaviour (Gáspár et al., 2023; Shah et al., 2024), this study aims to classify Indonesian consumers based on sociodemographic characteristics to uncover their motivations and investment behaviours. The findings will support financial institutions and policymakers in designing targeted strategies to enhance financial inclusion and increase participation in sustainable finance.

METHOD

This study targets Indonesian retail investors in green financial instruments, using purposive non-probability sampling. An online survey via T-survey was distributed to users of Ajaib, Bibit, Pluang, Stockbit, Ipot, and RTIBusiness. Of 200 responses, 196 were analysed after excluding incomplete ones. A non-hierarchical K-means cluster analysis was used, as it outperforms hierarchical clustering (Kaushik & Mathur, 2014). The questionnaire, adapted from Gáspár et al. (2023), assessed factors like "Greens, financial return matters less," "Sustainable," "Risk takers for return," and "Influenceable." It comprised three sections: sociodemographic characteristics, conscious consumption and sustainability, and financial product selection.

RESULT

The results of the cluster analysis for each factor are interpreted in Figure 1 and Table 1. The findings reveal three distinct consumer segments: Conservative (C1), who exhibit below-average investment preferences; Influenceable (C2), who exhibit moderate investment preferences, moderate interest in green financial products, and susceptibility to influence in financial decision-making; and those who are primarily interested in financial returns, open to green financial products, but resistant to external influence in decision-making (C3).
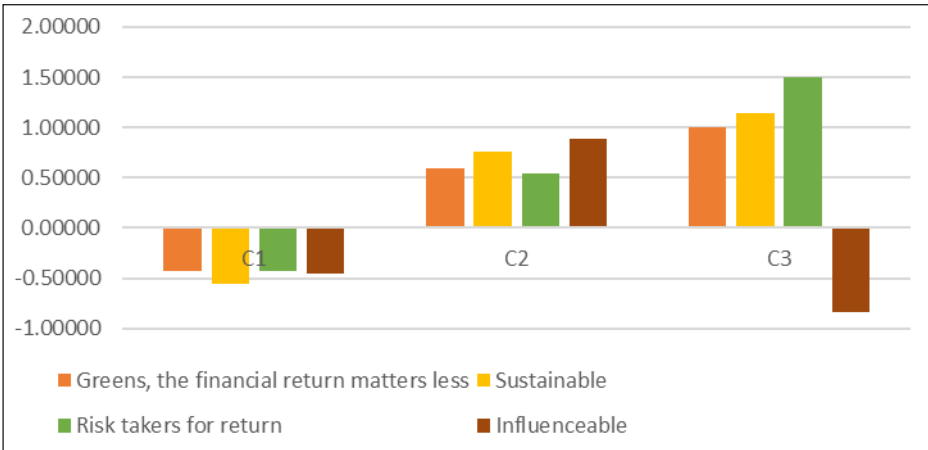
Figure 1. Cluster centres

Table 1
Characterisation of clusters according to sociodemographic traits

Items	Sig.	C1 - Conservative	C2 – Influenceable	C3 – Risk taking
Gender	< 0.01	Male (64,81%); Female (35,19%)	Male (44,74%); Female (55,26%)	Male (83,33%); Female (16,67%)
Age	< 0.05	18 – 24 (22,22%) 25 – 31 (33,33%) 32 – 38 (16,67%) 39 – 45 (12,96%); Above 45 (14,81%)	18 – 24 (23,68%) 25 – 31 (23,68%) 32 – 38 (31,58%) 39 – 45 (10,53%) Above 45 (10,53%)	18 – 24 (50,00%) 32 – 38 (33,33%) Above 45 (16,67%)
Education	< 0.001	Senior High School/ same level (31,48%); Graduate and post graduate (64,81%)	Senior High School/ same level (13,16%) Graduate and post graduate (73.68%)	Senior High School/ same level (50,00%) Graduate and post graduate (50,00%)
Occupation	< 0.001	Employee (61,11%) Entrepreneur (29,63%)	Student (15,79%) Employee (73,68%)	Student (33,33%) Entrepreneur (50,00%)
Expense per month (IDR)	< 0.05	> 532.001 – 1.200.000 (31,48%); > 1.200.000 – 6.000.000 (53,70%); > 6.000.000 (14,81%)	> 532.001 – 1.200.000 (23,68%); > 1.200.000 – 6.000.000 (55,26%); > Rp6.000.000 (21,05%)	> 532.001 – 1.200.000 (33,33%); > 1.200.000 – 6.000.000 (50,00%); > Rp6.000.000 (16,67%)
Financial Goals	<0.05	Formulate specific goals for some condition (51.85%)	Formulate specific goals for some condition (50.00%)	Long- and short-term financial goals (66.67%)
Gathering information on financial topics	< 0.001	Just before making an investment decision (66,67%)	Just before making an investment decision (63,16%)	Daily information gathering (66,67%)

Source: Rahmah et al. (2016)

DISCUSSION AND CONCLUSION

However, the findings of this study, which revealed that no single user category has been identified as prioritising green financial products in investment decisions, implying that green financial products have not emerged as a popular investment product among Indonesian customers. Indonesian consumers, still lack adequate knowledge and access to investment opportunities, including green financial products. To address this issue, financial literacy programmes and government incentives must be strengthened to encourage wider adoption of sustainable investments. Financial institutions can create tailored marketing strategies to effectively promote green financial solutions by recognising the unique characteristics and preferences of each consumer segment. For conservative investors (C1), financial institutions should focus on offering low-risk products such as green fixed deposits, along with clear information that emphasises investment security and long-term sustainability. The easily influenced segment (C2), would benefit from community-based marketing strategies and influencer endorsements. Additionally, loyalty programmes could be introduced to encourage consistent investment in green products. For the high risk-taking segment (C3), emphasising the possibility for large profits from green investments may need to be more convincing. This group is more likely to respond to green financial products with competitive returns. It is important to provide transparent information regarding the environmental impact of each investment to support informed decision-making.

ACKNOWLEDGEMENT

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Analysing the Evolution of Sustainability Awareness: Trends and Insights Through Bibliometrics

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ABSTRACT

This study examines sustainability awareness research over the past two decades, identifying key trends using a bibliometric analysis of 298 publications from the Scopus database. Targeted keywords such as "sustainability awareness", "environmental consciousness", and "eco-awareness" guided the search. Findings reveal a sharp increase in research output since 2019, with journal articles (67.11%) and conference papers (23.83%) dominating. Key themes include environmental education, sustainable development, corporate social responsibility (CSR), and behavioural change. The study highlights the interdisciplinary nature of sustainability research and its growing significance. Insights from this analysis inform policymakers, educators, and researchers, supporting sustainability education, policy development, and corporate strategies to enhance environmental awareness.

Keywords: Bibliometric analysis, corporate social responsibility, environmental education, publication trends, sustainability awareness

INTRODUCTION

Sustainability awareness involves understanding the interconnected environmental, social, and economic factors that influence actions and behaviours contributing to sustainable development. This awareness is central to fostering sustainable practices across various sectors, including tourism, banking, and fashion, where adoption often faces mixed reactions and requires enhanced consumer education (Ferrer-Estévez & Chalmeta, 2021). Despite the growing interest in sustainability research, there remains a noticeable gap in consolidating a comprehensive understanding of its evolution, particularly in terms of dominant themes and trends. Bibliometric studies

serve as essential tools for identifying influential authors, key institutions, collaborative networks, and thematic clusters, thereby illuminating the structure and dynamics of research domains (Fahimnia et al., 2015; Kumar et al., 2020). By employing bibliometric analysis, this study aims to deliver an in-depth examination of publication trends within sustainability awareness research, identifying influential contributors, prominent institutions, and pivotal thematic areas that have shaped the field's development (Geng et al., 2017; Md Khudzari et al., 2018). Understanding these trends enriches academic discourse while offering valuable insights for policymakers, practitioners, and educators in designing effective sustainability programmes and strategies. This analysis will track the evolution of sustainability awareness research, revealing shifts in focus, emerging areas of study, and the broader impact on both academia and society. By identifying national and international research networks and highlighting key trends, this study informs future sustainability inquiries (Menon & Suresh, 2020; Pouratashi, 2021). Bibliometric analyses have proven successful in identifying key figures, subjects, authors, institutions, and journals within sustainability research, enhancing the understanding of its development (Hsu, 2023). However, despite these contributions, a notable gap remains in bibliometric studies specifically focussed on sustainability awareness. Previous quantitative studies in sectors such as civil construction have predominantly addressed materials and project management, leaving sustainability awareness and its evolution underexplored (Malik et al., 2019). Ongoing research is essential to bridge these gaps, deepen understanding, and examine the implications of sustainability awareness for education and practice (Balakrishnan et al., 2019). This study lays the foundation for future research directions, promotes interdisciplinary collaboration, and advances global sustainability awareness by providing a structured analysis of existing literature and identifying areas for future exploration.

METHODS

This bibliometric analysis employed a structured and systematic methodology to examine the literature on sustainability awareness, utilising a bibliometric approach to systematically quantify and map large volumes of scientific information, identify research trends, influential contributions, and knowledge gaps (Donthu et al., 2021). The Scopus database was selected for its extensive coverage of high-quality, peer-reviewed journals across multiple disciplines, robust indexing, and advanced bibliometric capabilities (Falagas et al., 2008). A detailed search string was developed to ensure comprehensive coverage, resulting in an initial dataset of 298 documents published up to July 2024. Specialised software tools introduced by Dr. Aidi Ahmi, namely the BiblioMagica Version 2.8 and BiblioMagica Split 1.8, were employed for data management and analysis. The BiblioMagica Version 2.8 facilitated bibliometric analyses by generating insights into publication frequencies, citation patterns, and key contributors, while the BiblioMagica Split 1.8 was used for data

cleaning and harmonisation, ensuring consistency and accuracy by removing duplicates, standardising author names, and verifying citations. The Microsoft Excel was utilised for data visualisation, generating clear and informative charts and graphs to highlight trends, citation rates, and patterns in sustainability awareness research. Additionally, a systematic review process guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) in Figure 1 was employed to enhance methodological transparency and reliability, with the PRISMA Flow Diagramme outlining the selection process from article identification to final inclusion. This comprehensive approach effectively mapped the sustainability awareness research landscape, identifying key trends, influential authors, prominent journals, and emerging research areas, providing a valuable foundation for future research, policymaking, and practices aimed at addressing global sustainability challenges.
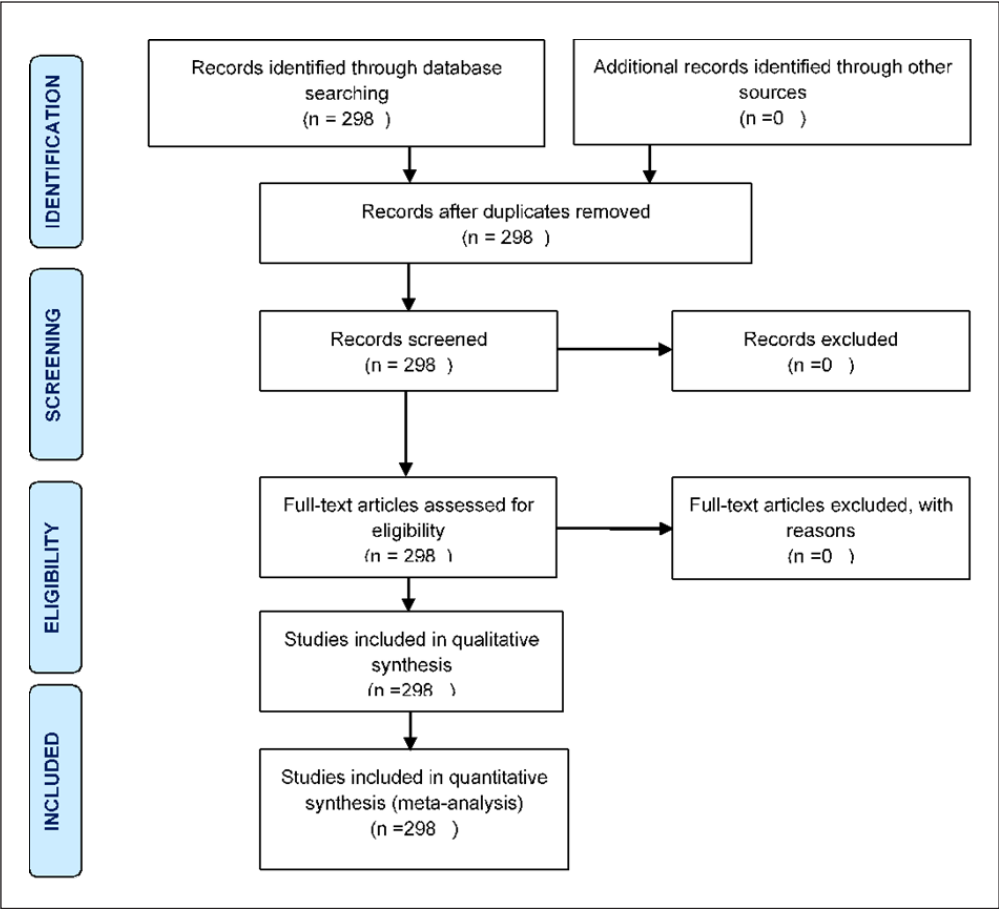

Figure 1. PRISMA (Preferred reporting items for systematic reviews and meta-analyses) flow diagramme
Source: Moher et al. (2009)

RESULTS

The Results section presents the key findings of the study in a clear and structured manner, often using tables, figures, and descriptive summaries. It should include a detailed explanation of the data collected, statistical analyses (if applicable), and patterns or trends observed.

Document and Source Types

Table 1 shows the distribution of publication types in a dataset of 298 publications on sustainability awareness. Articles dominate at 67.11%, indicating a preference for comprehensive research formats. Conference papers account for 23.83%, highlighting active participation in academic forums for presenting findings and obtaining peer feedback. Book chapters make up 5.37%, usually providing detailed contributions to edited volumes. Reviews and conference reviews together comprise 3.69%, suggesting less emphasis on summarising existing literature. This distribution highlights a focus on original research through articles and conference presentations in sustainability awareness.

Table 1
Document type

Document Type	Total Publications (TP)	Percentage (%)
Article	200	67.11%
Conference Paper	71	23.83%
Book Chapter	16	5.37%
Review	6	2.01%
Conference Review	5	1.68%
Total	298	100.00

Source: Generated by the authors using BiblioMagika® (Ahmi, 2023)

Table 2 shows the distribution of source types in a dataset of 298 publications on sustainability awareness. Journals are the dominant source, making up 69.13% with 206

Table 2
Source type

Source Type	Total Publications (TP)	Percentage (%)
Journal	206	69.13%
Conference Proceeding	64	21.48%
Book Series	19	6.38%
Book	9	3.02%
Total	298	100.00

Source: Generated by the authors using BiblioMagika® (Ahmi, 2023)

publications. This highlights researchers' reliance on peer-reviewed platforms for credible findings. Conference proceedings are the second most common source, at 21.48% with 64 publications, reflecting active participation in academic conferences for sharing and refining research. Books and book series account for smaller shares, at 6.38% (19 publications) and 3.02% (9 publications), respectively. Although less frequent, these sources provide valuable detailed coverage and insights into sustainability awareness.

Year of Publications - Evolution of Published Studies

Table 3 details publication metrics for sustainability awareness research from 2019 to 2023, covering total publications (TP), non-cited publications (NCP), total citations (TC), citations per publication (C/P), citations per cited publication (C/CP), h-index (h), and g-index (g). In 2019, 32 publications amassed 964 citations, yielding 30.13 C/P and 32.13 C/CP. The h-index and g-index were 16 and 31, respectively, reflecting strong citation impact. Despite rising to 94 publications by 2023, total citations fell to 231, with C/P at 2.46 and C/CP at 4.36. The h-index and g-index declined to 7 and 11, respectively. This indicates a drop in citation impact, suggesting either a delay in recognition or reduced impact of more recent research compared to earlier years. These trends highlight the need to sustain or improve publication quality and impact as research volume grows.

Table 3
Year of publications

Year	TP	NCP	TC	C/P	C/CP	*h*	*g*
2019	32	30	964	30.13	32.13	16	31
2020	40	29	869	21.73	29.97	16	29
2021	60	47	650	10.83	13.83	15	22
2022	72	56	442	6.14	7.89	9	17
2023	94	53	231	2.46	4.36	7	11
Total	298	215	3156	10.59	14.68		

Notes. TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; and g=g-index
Source: Generated by the authors using BiblioMagika® (Ahmi, 2023)

Multidisciplinary Focus and Key Themes in Sustainability Awareness Research

Table 4 details about analysis of sustainability awareness research shows that English is the dominant language, accounting for 98.66% of publications, which highlights its role in global scholarly communication. Research in this area is spread across various disciplines, with Social Sciences (46.98%) and Environmental Science (36.24%) leading the field, followed by Computer Science, Engineering, and Energy, reflecting the multidisciplinary

nature of sustainability challenges. The most active sources include *Sustainability (Switzerland)* and *Journal of Cleaner Production*, indicating strong research outputs. The most frequent keywords are "green accounting" (15.78%), "sustainability" (3.56%), and "environmental accounting", demonstrating a focus on environmental and social factors in business and sustainability practices.

Table 4
Year of publications

Aspect	Details
Dominant Language	English (98.66% of publications)
Leading Disciplines	- Social Sciences (46.98%)
	- Environmental Science (36.24%)
	- Computer Science
	- Engineering
	- Energy
Most Active Sources	- *Sustainability (Switzerland)*
	- *Journal of Cleaner Production*
Most Frequent Keywords	- "Green accounting" (15.78%)
	- "Sustainability" (3.56%)
	- "Environmental accounting"

Source: Generated by the authors using BiblioMagika® (Ahmi, 2023)

DISCUSSION

The bibliometric analysis of sustainability awareness research reveals a growing academic interest, as evidenced by the increasing number of publications over time, indicating global recognition of sustainability challenges and efforts to explore innovative solutions. The interdisciplinary nature of this research is evident, integrating perspectives from environmental science, economics, sociology, and management. Keyword co-occurrence analysis highlights sustainable development as the most dominant theme, alongside key topics such as environmental conservation and renewable energy. Another notable trend is the rising influence of corporate sustainability practices and corporate social responsibility (CSR), demonstrating how businesses are incorporating sustainability into their strategies. Citation analysis further underscores the significance of CSR research, showing that corporate policies increasingly align with environmental and social goals. These findings emphasise the expanding role of sustainability awareness across sectors, reinforcing the need for continued exploration of its impact on policy, business strategies, and societal behaviour.

CONCLUSION

The bibliometric analysis provides critical insights into the evolving landscape of sustainability awareness research, revealing key trends and emerging themes. The increasing prominence of interdisciplinary studies and corporate sustainability practices underscores the field's significance in addressing environmental, social, and economic challenges. High citation rates for research on sustainable development, environmental conservation, and CSR highlight the relevance of these topics. Future research should evaluate the effectiveness of sustainability policies and corporate initiatives in fostering long-term environmental and social responsibility. Addressing these gaps will enable scholars and practitioners to develop more effective strategies to advance sustainability awareness on a global scale.

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Research Trends of Augmented Reality-Related Studies in Education and Training – A Bibliometric Analysis

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ABSTRACT

Augmented reality (AR) is increasingly recognised for its ability to improve educational and training experiences by fostering learner engagement and performance. It has attracted academic interest since 2002. Presently, there is no comprehensive review of AR-related research in education and training. To address this gap, the current study utilised an VOS Viewer and Bibliometrix R-package software to analyse scientific AR literature in education and training. The analysis was focussed on the publication trend since 2002 and trending topics. Data was extracted from the Scopus database, resulting in 213 articles. Findings revealed AR in education and training as an active study area with a growing body of literature in recent years. This bibliometric review aims to guide future research directions by offering an overview of the present landscape of AR in education and training settings.

Keywords: Augmented reality, bibliometric analysis, education, training, VOS viewer

INTRODUCTION

Technological progress has reshaped everyday life, supporting the development of human skills, expanding knowledge access, and enhancing capabilities. An augmented reality (AR) is one example of a technology that is gaining traction in education and training (Mendoza-Ramírez et al., 2023). Studies in educational contexts highlight that AR applications can enhance a range of learner abilities, including cognitive development, innovation, self-direction, analytical reasoning, and independent thinking (Garzón et al., 2019). Other studies have shown that learners value the immersive and interactive experiences

enabled by the AR tools, which contribute to better understanding and retention (Vrellis et al., 2020) as they facilitate their understanding and knowledge retention (Sun et al., 2022).

PROBLEM STATEMENT

Although the AR is beneficial in enhancing skills acquisition and learning motivation (Turan et al., 2018), it is not without challenges. Among the challenges associated with learning through augmented realities are technical difficulties, and issues with technology acceptance as well as usability (Ajit et al., 2020).Moreover, although the literature on AR applications in education and training has shown an increase in recent years, academic reviews that address its implications in these two settings are limited with Hincapie et al. (2021) and Min and Yu (2023) being the exceptions. In line with the growing interest in the AR in education and training, the current study employed bibliometric techniques that utilise various quantitative tools to analyse extensive literature data sets related to this topic (Donthu et al., 2021). Such analysis is significant to understand the trends and development patterns of research related to the AR in these two settings.

Our study utilised the Scopus database as the data source. Only studies related to the AR education and training settings were considered for the study, while those outside this scope were excluded. Analysis was conducted using the VOS Viewer and Bibliometrix R-package tools to visualise and interpret data.

RESEARCH QUESTIONS

RQ1. What are the research development patterns until 2024 in the AR-related research in education and training?

RQ2. What are the trending topics in the AR-related research in education and training?

A total of 213 articles were analysed in the examined period. Figure 1 shows the research development patterns from 2002 until 2024. There were very few papers published on the AR research from 2002 until 2017. In 2018, publications started to increase, showing an annual publication count exceeding ten per year. Interestingly, the past three years showed a surge in the number of publications, with 2023 being the most productive, yielding 41 articles. Given this current trend, it can be anticipated that there will be a growth in the number of publications in the coming years.

In our study, the minimum word frequency was set at 5, with an annual word count of 3. Figure 2 presents the AR trending topics related to education and training that are based on keyword usage by authors. It can be seen that the recent AR research in these settings has been associated with medical students, medical education, reviews, systematic reviews, humans, and mixed reality. The term "AR" began to receive significant attention in 2021, often appearing in conjunction with terms like "virtual reality", "humans", and "e-learning".
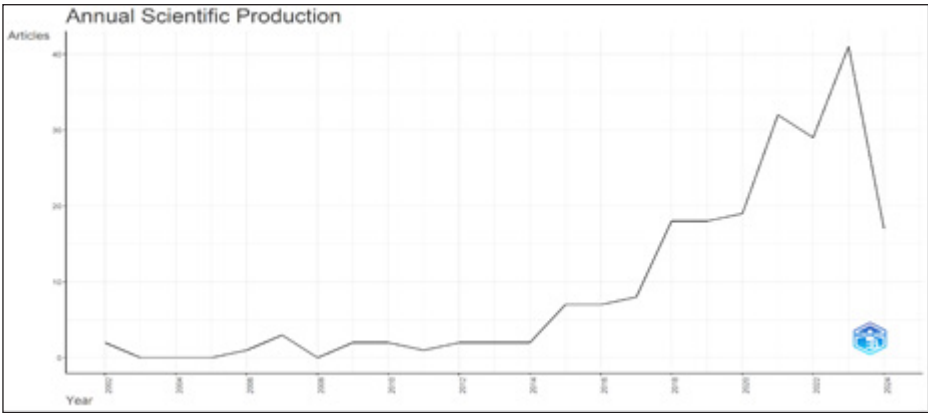
Figure 1. Total number of papers from 2002 to 2024
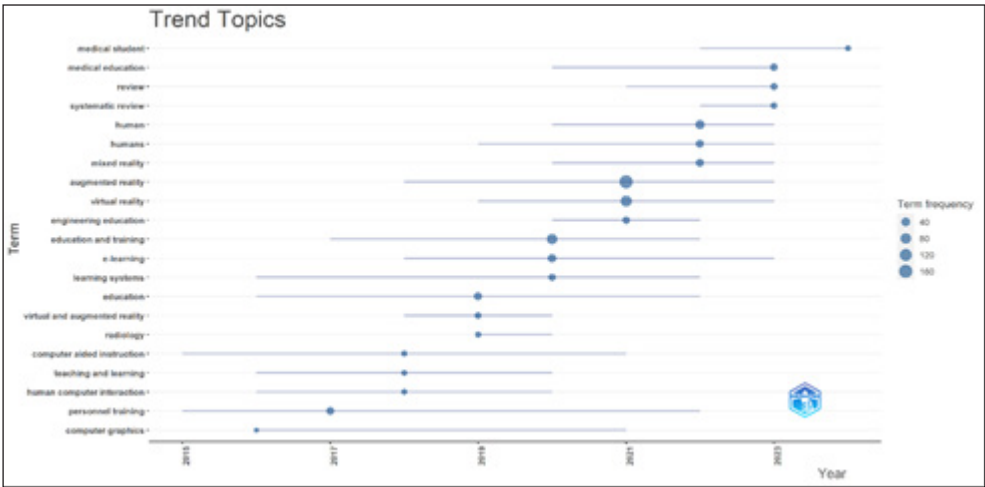

Figure 2. Trending topics with the use of keywords (*Source*: Bibliometric R-Package, Biblioshiny)

CONCLUSION

The current study addresses the state of the AR research in education and training by analysing research trends up to September 30, 2024. Key findings indicate that research started to increase since 2002 although the concept of the AR was introduced in 1968. Furthermore, this study stands out as the first bibliometric investigation specifically focussed on the AR-related research within the domains of education and training. The implication of this study underlines the relevance of the AR to enhance education and training. Future research may utilise other databases to provide a better overview of the trends in this area.

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The Role of Local Authorities in Fostering Sustainable Livelihoods in Urban Communities

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ABSTRACT

Urban areas are frequently regarded as centres of economic prospects, services, infrastructure, and amenities. Nevertheless, they also pose various challenges and risks for their inhabitants. In major Malaysian cities like Shah Alam, urban communities encounter issues such as poverty, health problems, inequality, crime, and the rights of people with disabilities. This paper outlines the findings of a study that formulated an action plan for the Shah Alam community. The objective of the study was to meet the community's needs and aspirations, facilitating the development of a sustainable community action plan. A qualitative research design was employed, utilising a case study approach. Focus Group Discussions (FGD) involved representatives from the community, stakeholders, and several development agencies. A total of 339 participants were chosen through Purposive Sampling. Furthermore, site observations were conducted to evaluate the community's way of life. The results revealed a strong call for local authorities to adopt a strategic action plan aimed at enhancing livelihoods. The final product was an action plan that acts as a crucial reference for the Shah Alam City Council in fostering sustainable community livelihoods.

Keywords: Action plan, livelihood, local authority initiative, sustainable community, urban area

INTRODUCTION

The cities in Malaysia are undergoing substantial growth, with both urban spaces and populations increasing swiftly. This growth presents various opportunities as well as challenges. For instance, Shah Alam is encountering a rise in population that creates a need for economic prospects, infrastructure, and public services. Initial

research has highlighted urban problems including poverty, health issues, inequality, crime, and disability rights, all of which affect community advancement. Community development is a prolonged process aimed at enhancing the living standards of the community (Riswan & Beegom, 2021; Silverman & Patterson, 2021). It is vital to have community development strategies that promote community participation in activities, problem-solving, and networking (Abiddin et al., 2022; Bhaktikul et al., 2021). The city government, particularly the Shah Alam City Council (SACC), has actively worked to tackle these issues through ongoing development initiatives that involve the community in decision-making, especially regarding community development.

PROBLEM STATEMENT

The swift expansion of cities like Shah Alam presents various challenges, such as urban poverty, health issues, inequality, and crime, which jeopardise the well-being of city dwellers. The city is confronted with rising demands for economic opportunities, infrastructure improvements, and public services. However, the growing population continues to exert significant pressure on urban systems, highlighting the urgent need for comprehensive and sustainable strategies to promote balanced development and enhance the quality of life for all communities (UN-Habitat, 2021).

RESEARCH QUESTION

What strategies can a community plan in Shah Alam incorporate to promote sustainability while effectively tackling urban issues and enhancing the quality of life, social welfare, and economic resilience of its residents? This research therefore employed a case study method in Shah Alam consisted of two phases: 1) Community Profiling, and 2) Action Plan Formulation. This involved a series of Focus Group Discussions (FGD), expert participation, site observations, and data analysis to create a sustainable community strategy. The Shah Alam City Council (SACC) devised a comprehensive action plan for the community, following a two-year time frame and using a Bottom-Up Approach. The plan prioritised community participation through FGD sessions and site assessments to tackle various social, economic, environmental, and management challenges. Significant issues identified included low levels of community engagement, economic stagnation, environmental problems, and insufficient public services. The plan also highlighted the importance of inclusivity, targeting specific demographics such as the elderly, youth, women, children, and individuals with disabilities. Additionally, it emphasised strategies across 11 focussed thematic areas, as illustrated in Figures 1 and 2.
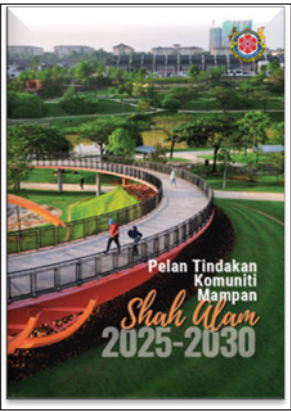
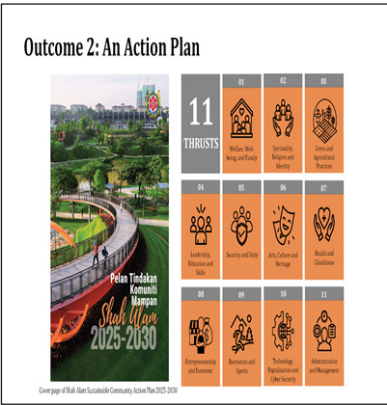Figure 1. Shah Alam sustainable community action plan 2025-2030

Figure 2. The 11 focussed areas for strategic actions

CONCLUSION

The Shah Alam Sustainable Community Action Plan 2025-2030 was created by the SACC to tackle the challenges resulting from urban expansion and a growing population. This initiative focussed on fostering sustainable living and enhancing the community's well-being. The plan employs a Bottom-Up Approach, developed over two years, with the Phase 1 concentrating on Community Profiling and Phase 2 on formulating the action plan. The process incorporated three FGD sessions and multiple technical consultations with experts. This action plan serves as a thorough community development strategy that incorporates community feedback to address the needs and demands of Shah Alam's residents for the next five years. It is in line with both international and local policies and prioritises specific groups, including women, children, youth, people with disabilities, and the elderly. By engaging the community in the planning process, the SACC has achieved noteworthy advancements in creating a sustainable, inclusive, and resilient urban setting, ensuring that growth corresponds with the needs of its diverse people.

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The Key Determinants Influencing Dividend Policy Among Public Listed Firms in Malaysia

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ABSTRACT

The objective of this research is to examine and identify the key factors influencing dividend policy among all Malaysian public listed firms using a static model approach. This study spans between 2011 to 2021 and includes 704 listed firm from Bursa Malaysia. This research intentionally omits companies from the banking industry as well as those outside the financial sector due to issues related to significant debt levels and industry regulations. This research aims to examine the connection between leverage, firm size, profitability, liquidity, and dividend policy in Malaysia. A static model is employed to examine these relationships effectively. The significance level for each finding was set at 0.05. The multivariate regression was utilised to test the hypothesis and achieve the research objective. The results indicate that only leverage and the size of the company is positively associated to dividend payments of public listed firms in Malaysia. Meanwhile, liquidity and profitability are not statistically significant in influencing the dividend pay-out ratio. Policymakers and managers may find this study useful when deciding whether to distribute profits as dividends. The financial manager's decision regarding this policy is likely to be the most crucial.

Keywords: Bursa Malaysia, dividend policy, firm size, leverage, liquidity, static model

INTRODUCTION

Dividend policy refers to the approach adopted by the management to decide how much cash to distribute to shareholders and the timing of these payments (Lease et al., 1999). A company's dividend policy serves as an internal benchmark to determine how much of its profits to be distributed to shareholders (Mohapatra & Panda, 2022). Factors like funding limitations,

company size, shareholder expectations, and regulatory frameworks influence this choice. Despite extensive research, there is no consensus on the key elements that shape dividend policies. This study focusses on Malaysia's capital market, exploring the unique factors that affect dividend policies in the country, such as concentrated ownership structures, the role of government-linked corporations (GLCs), and specific regulatory frameworks. These characteristics complicate the decision-making process, challenging traditional dividend theories like the free cash flow hypothesis, agency theory, and signaling theory. The study aims to fill the research gap and provide insights into how Malaysian firms balance shareholder expectations with financial stability and growth affect a company's financial stability, growth, and overall value. The dataset was processed using the Stata software (version 14). Specifically, the regression analysis was carried out employing pooled Ordinary Least Squares (OLS), random effects, and fixed effects models. Prior to conducting the main analysis, several diagnostic checks were performed to ensure the absence of multicollinearity and heteroscedasticity issues. These diagnostics included examining the correlation matrix and calculating the Variance Inflation Factors (VIFs) to detect potential multicollinearity. Additionally, robust standard error estimations were used to address any possible heteroscedasticity problems and strengthen the reliability of the regression results.

PROBLEM STATEMENT

Despite extensive global research on the factors influencing dividend policy, there remains a lack of comprehensive studies focussing on the Malaysian context. Malaysia's evolving economic landscape—shaped by post-pandemic recovery, technological disruptions, and changing investor priorities—necessitates a deeper understanding of the key determinants of dividend decisions among publicly traded companies. Identifying these factors is crucial to ensure that corporate practices are aligned with long-term shareholder value creation and market expectations.

RESEARCH QUESTIONS

What are the key factors influencing dividend policy among public listed companies in Malaysia?

The variable and proxy measurement is shown in Table 1. Figure 1 illustrates the conceptual framework examined in this research. In this framework, dividend pay-out ratio is the dependent variable. Based on the flowchart, the first stage of the study identifies key determinants of dividend policy, and the rest are the independent variables which include leverage, firm size, profitability, and liquidity.

Table 1
Variable and proxy measurement

| Variables	Description (formula)	Sources
Dependent Variable		
Dividend Payout Ratio	Dividend per share divided by earning per share	Eikon Datastream
Independent Variables		
Leverage	The ratio of total debt divided by total equity	Eikon Datastream
Firm Size	Natural logarithm of sales	Eikon Datastream
Profitability	The ratio of net income divided by total equity	Eikon Datastream
Liquidity	The ratio of current asset divided by total equity	Eikon Datastream
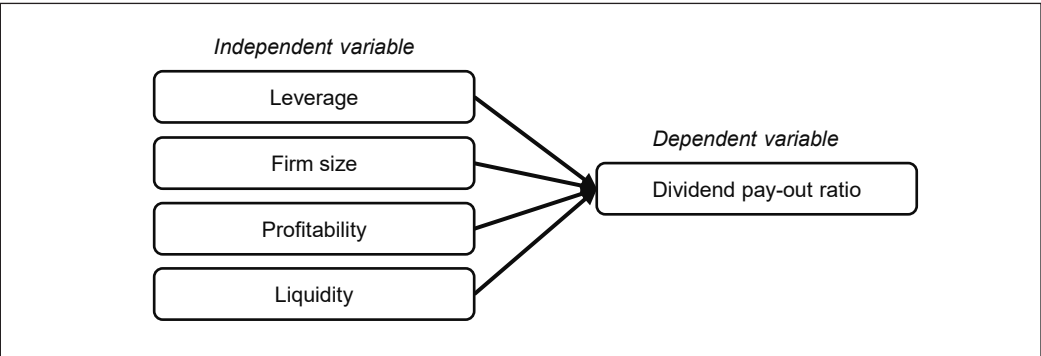
Figure 1. Diagramme of relevant theoretical framework

CONCLUSION

This study examines the key determinants of dividend policy among public listed firms in Malaysia using a static model approach. By employing the Stata 14, accurate findings were obtained for descriptive, correlation, and regression analyses. The Pooled OLS vs. Random Effects (RE) test was conducted, and only the Pooled OLS vs. RE test passed, confirming the suitability of the model.

The findings reveal that leverage and firm size are the most significant factors influencing the dividend payout ratio, while liquidity and profitability do not show a statistically significant relationship with dividend policy. These results provide valuable insights into the factors that shape dividend decisions in Malaysia's dynamic economic environment.

This study has several practical implications. For investors, it offers a clearer understanding of dividend policy determinants, which can aid in making informed investment decisions. Meanwhile, for the management, the findings highlight key financial considerations when formulating dividend distribution strategies. For future researchers, this paper contributes new evidence from a Malaysian context, thereby supporting and

guiding future developments for further exploration into evolving corporate finance trends. Overall, aligning business practices with shareholder value creation and market expectations remains crucial in ensuring sustainable financial performance and investor confidence.

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Knowledge Transfer Behaviour Among Malaysian Public Sector Employees

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ABSTRACT

This study examines the relationship between strategic human capital management (HCM) and knowledge transfer behaviour practices among Malaysia's public sector employees., This study also aims to analyse how workforce optimise organisational resources effectively. By using the WarpPLS software and partial least squares structural equation modelling (PLS-SEM), the research analysed responses from 173 public employees across multiple hierarchical levels. Results demonstrate a statistically significant link, with HCM improvements explaining 21% of the variance in knowledge transfer behaviour ($\beta = 0.28$, $p < 0.05$), confirming that enhanced human capital investment directly strengthens intra-organisational knowledge flows. The findings highlight the necessity for public institutions to cultivate multigenerational collaboration frameworks and adaptive learning environments, which are crucial given that Malaysia's ongoing challenges in talent retention and skill mismatches. Through institutionalising continuous learning mechanisms, the public sectors could better address the human capital constraints identified in Malaysia's development plans.

Keywords: Human capital, knowledge transfer behaviour, public sector

INTRODUCTION

In the current climate, public sectors are concerned on issues regarding human capital management (HCM) and how these issues influence towards the knowledge transfer behaviour (KTB) among employees in public sector organisations. This scenario particularly amid workforce generational diversity and evolving challenges. The findings emphasise that fostering inclusive organisational cultures and leveraging multigenerational creativity are critical to optimise HCM strategies, as differing generational values and behaviours (Casalegno et al., 2022; Dunn-Cane et al., 1999) necessitate tailored approaches to empower employees.

PROBLEM STATEMENT

The public sectors have recognised the benefits of using knowledge to deliver its public services (Daud & Yusuf, 2008; Mura et al., 2012). An organisation can derive ongoing value from intellectual capital management. Many academics concurred that maintaining competitive advantage and performance in public sector organisations require effective management of intellectual capital (Kardina, 2012; Ramezan, 2011). The components of human capital contribute to its uniqueness from its competitors (Daud & Yusuf, 2008). Ramirez (2010) stated that it is vital to develop an intellectual capital management model specific to the public sector. This is echoed by other researchers investigating intellectual capital management in the public sectors (Lonnqvist & Kujansvu, 2007; Wiig, 1997).

RESEARCH QUESTIONS

The aim of this study is to find the connection between human capital management and knowledge transfer behaviour practices in the Malaysian public sectors. Employees in the public sector who engage in knowledge transfer behaviour inside their organisations serve as the study's empirical foundation. Thus, research hypotheses are developed: it was hypothesised that knowledge transfer behaviour and human capital are related.

Knowledge transfer behaviour is defined as an individual's sharing of information and work-related experiences within the organisation. Human capital management is defined as managing various knowledge aspects in an organisation. The theory looks at how much human capital has a significant influence on the knowledge transfer behaviour. The standard deviation measures the degree of data scatter around the mean value and degree of variation in the respondents' responses. The study variables' mean, and standard deviation are shown in Table 1. All factors have mean scores above the midpoint of 4. To put it simply, the standard deviation figures showed that the scores were not very near to the mean. In the range of 1.0 to 1.09, the mean score of the variables in this study varied from 5.8 to 5.9 standard deviations. A low standard deviation also means data are clustered around the mean, and when the standard deviation is close to zero, it indicates that data points are close to the mean.

Table 1 shows that respondents had a high opinion of the human capital variable (M=5.95, SD=1.001), one of the variables of intellectual capital management (ICM). This

Table 1
The descriptive statistics analysis results

Variable	Mean (M) Indicator	Mean (M) Variable	Standard Deviation (SD)
Human Capital Management	5.95	5.79	1.001
Knowledge Transfer Behaviour	5.85	5.69	1.099

indicates that the study's public sector participants understood the value of human capital as a tool for managing an organisation's intellectual capital. The KTB measure showed high levels of acceptance among respondents (M=5.85, SD=1.099). Every item related to the study variables was answered using a 7-point Likert scale, where 1 represented "strongly disagree" and 7 represented "strongly agree." Total items tested for HCM were 13 and 36 items for KTB.

In summary, the study's variables' mean, and standard deviation scores reflect the population of the Malaysian public sector employees. The hypothesis examines the substantial impact of the link between the HCM and KTB. Table 1 presents the corresponding results of the beta, R-square, p-value, and t-value. Every observed variable for the human capital management in connection to the knowledge transfer behaviour is associated with the hypothesis of study. Investigations were conducted into the connections between the HCM and KTB. The WarpPLS 8.0 SEM analysis software was used to test the hypothesis. The beta value was shown to have a positive influence ($\beta = 0.28$, positive) on the link between the human capital management and knowledge transfer behaviour. The HCM and KTB's relationship is strongly correlated, as seen by the r-squared value of ($r^2 = 0.210$) for this hypothesis.

The results also explore the relevance of the association between the human capital management and KTB, with p-values less than 0.01. Thus, the findings recognise that the human capital management (HCM) and knowledge transfer behaviour (KTB) have a positive and significant association with the Malaysian public sectors. Additionally, as the t-value of 6.402 is greater than the t-ratio of 1.96, hypothesis was determined to be supported. This clarified how the knowledge transfer behaviour (KTB) was influenced by the human capital management (HCM). This outcome is consistent with a study by Baldini et al. (2016) that discovered that human capital influenced organisational transfer efforts.

CONCLUSION

In conclusion, by bridging the gap between theory and practice, the study advances the conversation on knowledge transfer behaviour and human resource management. Researchers can refine their models to investigate internal capital and external capital about the KTB based on the framework. The current framework recognises situation-specific aspects in the HCM rather than attempting to create a model that fits the requirements of diverse organisations and managerial scenarios. Thus, the study's framework might be a helpful tool for academics or managers in the public sectors to gauge and comprehend how much an organisation applies its HCM to enhance employee knowledge transfer practices.

The suggested approach can also be utilised to gather information to understand better how much managing human capital from the viewpoints of many generations will help public sector organisations. Managers in the public sector may also find the framework

helpful as a tool to gather data on the quality of human capital practices in their companies. Managers in the public sectors might then use the data to plan and incorporate human capital for learning, evaluation, and organisational growth.

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Heritage Tourism: The Effect of Heritage Brand on Tourist Satisfaction

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ABSTRACT

This study examines the impact of heritage brands on tourist satisfaction within heritage tourism. By analysing the role of these iconic brands, the research aims to uncover how they enhance the visitor experience. Through a comprehensive analysis of numerical data, statistical findings and relevant case studies, the study identifies specific factors that increase tourist satisfaction, emphasising the importance of heritage brands in fostering cultural, and historical connections for tourists. Data collection is conducted using a quantitative cross-sectional approach via Google Forms. For data analysis, the Pearson Correlation Analysis is employed to explore both the direction and strength of the relationship between two continuous variables. Results show that heritage brand awareness, heritage brand image, heritage brand quality, and heritage brand value have a notable impact on the satisfaction of tourists visiting the Malacca heritage site. The findings offer practical insights for destination management and businesses on leveraging heritage brands to maximise visitor satisfaction in heritage tourism.

Keywords: Heritage brand awareness, heritage brand image, heritage brand quality, heritage tourism, tourist satisfaction

INTRODUCTION

Malacca is a popular tourist destination, offering visitors the opportunity to engage with local culture alongside its historical value. The city's heritage brand sets the foundation for a pleasant vacation experience, shaping visitors' expectations. Tourists are attracted to Malacca's heritage brand because it promises authentic

experiences, such as exploring vibrant night markets, savouring diverse local cuisine, and participating in traditional festivities. Despite its abundant cultural heritage and recognition as a UNESCO World Heritage site, Melaka encounters several obstacles that can impact its brand image and, in turn, tourist satisfaction. These obstacles include rivalry from other heritage destinations, inconsistent visitor experiences, and the necessity for improved digital engagement (Johari & Anuar, 2020). Therefore, understanding the relationship between the effectiveness of Malacca's heritage brand and visitor satisfaction is vital for those looking to maximise the tourism potential of this unique destination.

This study aims to determine whether heritage brands influence the level of satisfaction among tourists. It will examine elements of heritage brands, including heritage brand awareness, heritage brand image, heritage brand value, and heritage brand quality, to assess their impact on visitor satisfaction in Malacca.

PROBLEM STATEMENT

Mohammed et al. (2022) underscored the critical role of heritage brand equity in creating awareness and conveying a positive image, perceived quality, and value that ultimately contribute to tourist satisfaction. As heritage destinations grow increasingly competitive over time, destination managers must strive to offer distinctive features that set them apart, adding value that tourists perceive in a heritage destination. This, in turn, significantly influences tourists' satisfaction with the destination (Johari & Anuar, 2020; Kumail et al., 2022; Shi et al., 2022).

In the context of Melaka, which is considered a heritage destination, several issues have arisen, including the challenge of clogged drains, instances of people partying inappropriately along the Melaka riverside, and unfortunate incidents like a tourist from Langkawi accidentally falling into the Melaka River while taking a 'selfie.' These issues have had an adverse impact on the heritage destination's image (Johari & Anuar, 2020).Moreover, trishaws, which are recognised as an integral part of Melaka's heritage and a valuable resource to the state, are currently facing challenges and issues in maintaining their status as a tourism attraction for visitors (Aziz et al., 2022). Research has indicated that trishaws in Melaka have lost their identity and failed to uphold the state's unique character. This loss of identity has contributed to a decline in the visitors' interest. Additionally, there is a growing concern regarding the safety of all parties involved, including trishaw riders and tourists.

RESEARCH QUESTIONS

1. What is the relationship between heritage brand awareness towards tourist's satisfaction?
2. What is the relationship between heritage brand image towards tourist's satisfaction?

3. What is the relationship between heritage brand quality towards tourist's satisfaction?
4. What is the relationship between heritage brand value towards tourist's satisfaction?

FRAMEWORK

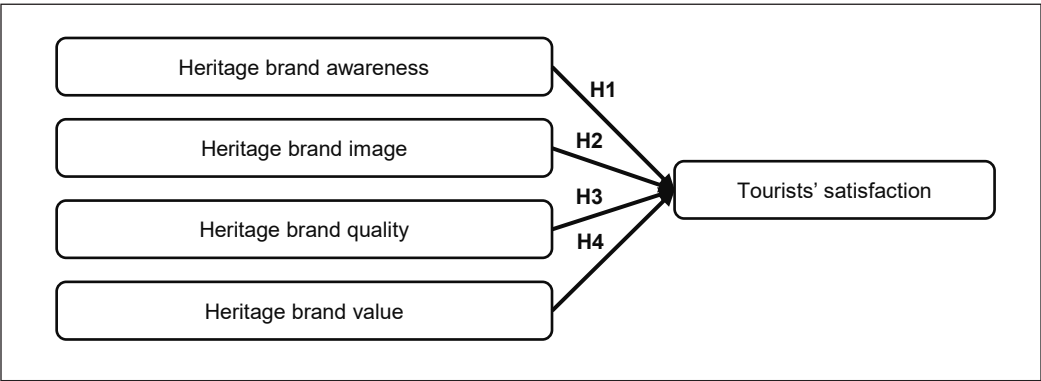Figure 1 shows the conceptual framework of the study, adapted from Mohammed at al., 2022.

Figure 1. Conceptual framework adapted from Mohammed et al. (2022)

HYPOTHESIS

Hypotheses of the study are:

H1: There is a relationship between heritage brand awareness and satisfaction of tourists towards visiting Malacca heritage sites.

H2: There is a relationship between heritage brand image and satisfaction of tourists towards visiting Malacca heritage sites.

H3: There is a relationship between heritage brand quality and satisfaction of tourists towards visiting Malacca heritage sites.

H4: There is a relationship between heritage brand value and satisfaction of tourists towards visiting Malacca heritage sites.

A questionnaire has been distributed via online towards tourist's satisfaction on Malacca's heritage sites which consist of domestic tourist that have visited heritage tourism destinations in the state of Malacca, Malaysia. The questionnaire was developed into Google Forms and published through social media such as Facebook, Instagram, and WhatsApp. After one month of distribution, there were 303 respondents who answered the survey questionnaire.

Table 1 below presents the results of the hypothesis testing and findings related to the relationships between heritage brand dimensions—namely brand awareness, brand image, and brand quality—and tourist satisfaction.

CONCLUSION

Upon conducting and concluding this study, it can be affirmed that the heritage brand significantly influences the satisfaction of tourists visiting the Malacca heritage site. In summary, the research aims to explore the relationship between the independent variables and dependent variable. The fulfilment of the study's objectives in relation to the thesis is vital in establishing the interconnection between independent and dependent variables. The acceptance of all hypotheses in this research paper contributes valuable insights for future studies, providing a foundation for further development of this topic. The findings suggest that heritage brand awareness, heritage brand image, heritage brand quality, and heritage brand value have a notable impact on the satisfaction of tourists visiting the Malacca heritage site.

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PERTANIKA PROCEEDINGS

Micro-Credit Financing and Business Sustainability Among SMEs

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ABSTRACT

Small and Medium Enterprises (SMEs) play a crucial role in the Malaysia's economy by driving employment and economic growth. However, many SMEs face significant challenges in obtaining adequate financing, particularly micro-credit, which is vital for their growth and sustainability. This study examines the connection between micro-credit financing and business sustainability among SMEs in Kedah and Perlis, focussing on key factors such as access to micro-credit, financial literacy, loan size, interest rate, repayment terms, and entrepreneurs' skills and knowledge. A structured questionnaire, adapted from validated instruments, was distributed to 125 SME entrepreneurs in Kedah and Perlis who had previously accessed micro-credit financing. Using a quantitative research design, data were collected and analysed using the SPSS to assess the relationship between the variables, primarily through the multiple regression analysis. The regression model was statistically significant, $F_{(6,118)} = 4.889$, $p < 0.001$, however, the adjusted R^2 value of 0.199 suggests that only 19.9% of the variance is explained. Among the six variables, only skills and knowledge were significant predictors ($\beta = 0.395$, $p < 0.001$). These results highlight the need for targeted interventions, such as enhanced training programmes, to equip SME owners with the necessary skills to optimise micro-credit financing for sustainable growth.

Keywords: Business sustainability, entrepreneur, micro-credit financing, Small Medium Enterprises (SMEs)

INTRODUCTION

The Malaysian economy heavily depends on the Small and Medium Enterprises (SMEs), which significantly contribute to employment and economic growth. However, many SMEs struggle to secure adequate financial resources, particularly micro-credit, which is vital for business sustainability (AL-Maamari et al., 2025;

Gatto & Sadik-Zada, 2022). Factors such as financial literacy, loan size, interest rates, repayment terms, and entrepreneurial skills add to the uncertainty regarding the effectiveness of micro-credit in supporting SMEs (Nor et al., 2021; Sabli et al., 2018). Rigid lending criteria, high collateral requirements, and complex financial products further hinder SMEs' access to financing (Ikmal Khairulluzin et al., 2019). To address this, innovative micro-credit programmes have been introduced, but their long-term impact remains uncertain. Financial literacy programmes that enhance entrepreneurs' knowledge on credit management and financial planning may help bridge this gap to reduce the risks of fund mismanagement and repayment failure (Bernard, 2019). Another critical concern is whether the loan amounts provided through micro-credit are sufficient for the SMEs' capital needs. Limited loan sizes may hinder growth, while larger loans can create a financial burden if interest rates and repayment terms are unfavourable (Adlin et al., 2023; Uwonda & Okello, 2015). Additionally, entrepreneurial skills and business knowledge play a crucial role in ensuring business sustainability, as financial support alone does not guarantee success (Somwethee et al., 2023). This raises questions about the adequacy of existing financial literacy programmes and entrepreneurial training in equipping the SMEs with the necessary skills. Given these complexities, this study aims to examine the relationship between micro-credit financing and business sustainability to provide insights that can inform policymakers and financial institutions in designing more effective SME support programmes.

METHODOLOGY

This study adopts a quantitative research design to assess the impact of micro-credit financing on the SMEs' sustainability in Kedah and Perlis, Malaysia. The SME owners across various industries, including retail, manufacturing, and services, form the target population. A purposive sampling strategy selects the SME owners with micro-credit experience, with a required sample size of 74 determined by a G*Power software. However, to enhance accuracy and representation, data is collected from 125 respondents who have received micro-credit from the government or non-government organisations. A structured questionnaire, adapted from validated studies (Adlin et al., 2020), ensures reliability in measuring micro-credit financing and business sustainability. The questionnaire consists of 30 items across eight sections, measured on a five-point Likert scale. Ethical approval is obtained from Universiti Teknologi MARA (UiTM), with participant consent secured before the data collection. The data collection was conducted from September 1 to September 28, 2024, via in-person surveys. The data was analysed using SPSS version 26, applying descriptive statistics, correlation, and regression analysis to evaluate the significance of micro-credit financing in SME sustainability.

FINDINGS AND DISCUSSION

The study involved 125 respondents from the SMEs industry. The respondents represented SMEs in various business sectors including the service industry, food and beverage, retailing, and manufacturing. The multiple regression analysis as shown in Tables 1, 2, and 3 was conducted to examine the impact of micro-credit financing aspects on the business sustainability of the SMEs. The overall regression model was statistically significant, $F(6,118) = 4.889$, $p<0.001$, indicating that the set of independent variables collectively explains a significant portion of the variance in the SME business sustainability. However, the adjusted R^2 value of 0.199 suggests that only 19.9% of the variation in business sustainability can be attributed to these factors, implying that other external or internal elements may also influence the SMEs' long-term viability.

Among the six independent variables, only skills and knowledge emerged as statistically significant predictors of business sustainability, with a standardised beta coefficient ($\beta = 0.395$, $p < 0.001$). This finding highlights the crucial role of entrepreneurial competencies in ensuring the SME sustainability. Business owners with greater skills and

Table 1
Model summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.446[a]	.199	.158	.39463

Table 2
ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.569	6	.761	4.889	<.001[b]
	Residual	18.377	118	.156		
	Total	22.946	124			

Table 3
Coefficients

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.023	.419		4.833	<.001
	Access to micro-credit	.116	.074	.149	1.564	.121
	Literacy Programme	.002	.090	.002	.018	.986
	Loan Size	.058	.104	.063	.560	.576
	Interest Rate	-.023	.098	-.031	-.235	.814
	Repayment Terms	-.140	.092	-.189	-1.520	.131
	Skill and Knowledge	.437	.115	.395	3.805	<.001

knowledge are more likely to make informed financial decisions, adapt to market changes, and implement effective business strategies, ultimately contributing to long-term success. This aligns with previous research emphasising the importance of managerial capabilities, technical expertise, and continuous learning in fostering business resilience (AL-Maamari et al., 2025; Somwethee et al., 2023; Bernard, 2019). Entrepreneurial knowledge plays a key role in the ability to leverage financial resources efficiently, reducing the risk of mismanagement and business failure (Uwonda & Okello, 2015).

CONCLUSION

This study examined the relationship between micro-credit financing and business sustainability among the SMEs. The results suggest that while access to micro-credit is important, its effectiveness in ensuring business sustainability largely depends on the skills and knowledge of entrepreneurs. Therefore, policymakers and financial institutions should focus on strengthening capacity-building programmes, such as financial literacy and entrepreneurial training, to maximise the benefits of micro-credit financing. Future research should explore additional factors that may contribute to the SMEs' long-term success, including market conditions, business strategies, and government support initiatives.

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A Systematic Literature Review on the Factors Influencing E-Tax Services Adoption on the MSME Tax Compliance

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ABSTRACT

E-tax services have been widely used in developing countries. e-tax services assist a country towards an easy and convenient tax process. Adoption of e-tax services offers many benefits towards the tax compliance for taxpayers. The efficacy of an e-tax system is contingent upon a taxpayer's approval. However, Micro, Small, and Medium Enterprise (MSMEs) users still face difficulties using e-tax services through a digital platform for many reasons. This study sought to identify the determinants affecting the adoption of e-tax services in developing nations, notwithstanding their advantages. This study has identified the factors of the e-tax service adoption by MSMEs on the tax compliance using a systematic literature review methodology to address the research aim. This study systematically reviews the factors of e-tax service adoption on the MSMEs tax compliance adhering to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. All 25 papers were identified for thorough synthesis. This study has chosen articles utilising two primary databases, Scopus and Web of Science, together with one supplementary resource, Google Scholar. Based on the thematic analysis, four themes were found: technological, economic, social capital, and psychological factors. This study provides several notable advances to both practical applications and the understanding of the e-tax service acceptance. The findings explain the importance of the e-tax service adoption by the MSMEs on the tax compliance and provide direction for future research.

Keywords: E-tax services adoption, MSME, online tax services, tax compliance

INTRODUCTION

The advancement of digital technology has led many countries to adopt the digital tax system or electronic tax system (e-tax). The e-tax services are available in digital portal

and mobile applications to provide easy, secure, efficient, and fast access to the taxpayers. e-tax services play a pivotal role in ensuring tax compliance. Mbise and Baseka (2022) indicate that e-tax systems improve the tax compliance due to the availability of the tax data on digital platforms. Despite the significance of e-tax services, the concerns of non-compliance continue to persist. Regardless of all the efforts raised to make the tax process easier, the system remains unnoticed by the public, especially micro small business owners (Mukuwa & Phiri, 2020).

Most previous studies have primarily examined the factors influencing e-filing service adoption but have not thoroughly explored the adoption of the comprehensive e-tax services by the MSMEs. Bassey et al. (2022) conducted a general systematic review of digital tax administration. This study seeks to address the gap by systematically examining prior research concerning the MSMEs' adoption of e-tax services for the tax compliance. The review is guided by two research questions: (1) What has previous literature focussed on regarding the MSMEs' adoption of e-tax services? and (2) What factors influence the MSMEs' adoption of e-tax services for tax compliance.

METHODOLOGY

This review follows the Preferred Reporting Item for Systematic Reviews (PRISMA) guideline. First, the research question was formulated using PICo (Shaffril et al., 2018). Based on this concept, the authors incorporated three key factors in the review: Micro, Small, and Medium Enterprises (Population), e-tax services adoption (Interest), and Malaysia (Context). Second, the primary data sources for the review were the Web of Science (WoS), Scopus, and Google Scholar databases. The systematic review process involves four stages. Below is a diagramme summarising the process in selecting the final articles (Figure 1).

Stage 1: Literature identification	**Stage 2: Screening**
Identifying literature using keywords in databases	Articles were included or excluded based on criteria
Sample size (N) = 441	Sample size (N) = 338
Stage 3: Eligibility	**Stage 4: Inclusion**
Ensure all remaining articles met the objectives and related to the e-tax services and tax compliance	The final articles were analyzed and synthesized. A thematic analysis was performed to develop themes.
Sample size (N) = 308	Sample size (N) = 25

Figure 1. Diagramme of systematic review process
Source: Authors' work

FINDINGS AND DISCUSSION

The findings indicate that scholars have primarily focussed on two key areas: the adoption and continuous intention towards the e-tax services. Most studies employed quantitative research methods, utilising the regression analysis and Structural Equation Modelling (SEM) as analytical tools. Extant studies have shown that the theory of the Technology Acceptance Model (TAM) has been widely applied to analyse the factors that predict users' behaviour on information technology (IT) and understanding of the IT adoption. The thematic analysis leads to four themes related to the factors influencing e-tax services adoption on the MSMEs' tax compliance. These themes include Technological factors, Economic factors, Social Capital factors, and Psychological factors (Figure 2).

Theme 1: Technological factors	Theme 2: Economic factors
Perceived usefulness or performance expectancy (i.e. information completeness, reducing cost, energy saving, money saving), perceived ease of use or effort expectancy (i.e. easy navigation, quick response, accessibility), efficiency, web quality, service quality, and information quality.	Taxpayers must sacrifice time and money in order to comply with tax laws. It suggests using e-tax services leads to lower compliance costs and impacts tax compliance (Saptono et al., 2023).
Theme 3: Social capital factors	Stage 4: Inclusion
Social norms, trust, social engagement, and community (Abu Silake et al., 2024).	Tax knowledge, tax awareness, attitude, self-efficacy and anxiety.

Figure 2. Diagramme of themes
Source: Authors' work

CONCLUSION

This study presents a systematic literature review on factors influencing the e-tax services adoption on the MSMEs' tax compliance by concentrating on articles published between 2019 and 2024. Based on the analysis, several reasons lead to the adoption of the e-tax services by the MSMEs. It is grouped into four categories: Technological, Economic, Social Capital, and Psychological. The findings of this study provide valuable insights for tax policymakers to improve the e-tax services by addressing key technological factors and other factors in enhancing the e-tax services adoption among the MSMEs. Efforts should focus on improving system security, platform reliability, optimising user interfaces for a seamless experience, and integrating advanced automation for efficiency to increase the taxpayers' tax compliance. Additionally, greater emphasis should be placed on providing support for the MSMEs to encourage adoption. Furthermore, efforts are needed to enhance awareness and proper education to the MSMEs' taxpayers.

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Factors Affecting Service Provider Switching Intentions Among University Students

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ABSTRACT

The growing number of mobile phone service providers has intensified competition among companies, resulting in a variety of attractive packages and plans aimed at attracting customers. This competitive environment has encouraged subscribers to switch to different service providers. Since Prepaid subscribers are not bound by contractual obligations, they have greater flexibility to switch providers. Factors affecting service provider switching intentions among university students are examined, focussing on the effects of price, satisfaction, alternative attractiveness, and MNP-induced self-efficacy on intention to switch. The paper also explores potential methodologies that could be valuable for analysing these factors. The findings of this study are expected to deepen the understanding of what factors influence university students to switch service providers.

Keywords: Intention to switch, mobile phone services, prepaid subscribers, university students

INTRODUCTION

The telecommunications industry is rapidly evolving, with numerous mobile service providers competing to attract customers, particularly university students who rely heavily on mobile phones for communication, studies, and entertainment. Prepaid services, which offer flexibility without long-term contracts, have become especially popular among students, making it easier for them to switch providers. Mobile number portability (MNP) has

further simplified the switching process by allowing users to retain their phone numbers, eliminating a significant barrier. As a result, providers face increasing pressure to maintain customer loyalty, with students being more likely to switch due to their price sensitivity and lack of contractual obligations.

Factors such as price, customer satisfaction, and appealing alternative services significantly influence students' decisions to switch providers. However, there is a lack of research on how the MNP-induced self-efficacy impacts students' confidence in switching. This concept paper aims to explore these factors in the Malaysian context, where the MNP is relatively new, offering a deeper understanding of university students' provider- switching intentions. The findings could inform marketing strategies and customer retention efforts, providing valuable insights for mobile service providers seeking to attract and retain this dynamic and competitive consumer group.

PROBLEM STATEMENT

The Malaysian telecommunications industry is fiercely competitive, with service providers targeting university students as a key demographic segment due to their significant dependence on mobile phones for communication, education, and entertainment (Lin et al., 2021). Prepaid services are especially attractive to students because of their flexibility and with no long-term contracts. The introduction of the Mobile Number Portability (MNP), which allows users to retain their phone numbers when switching providers, has reduced a major barrier for prepaid users. The MNP not only simplifies the switching process but also encourages students who might otherwise stay with their current provider due to inertia or reluctance to change (Anis & Noor, 2021). However, there is still limited research on how the MNP interacts with factors such as price sensitivity and customer satisfaction to impact switching behaviour.

Price sensitivity and customer satisfaction play critical roles in the students' decisions to switch providers. University students are typically budget-conscious and can be easily influenced by even minor price changes, while dissatisfaction with service quality or customer support can push them to seek alternatives (Lin et al., 2022). Although these factors have been examined in broader studies, the specific dynamics influencing prepaid university students in Malaysia are still underexplored (Badeggi & Muda, 2021). Understanding these factors is essential for mobile service providers to stay competitive and develop effective strategies to retain this valuable consumer group.

RESEARCH QUESTIONS

This study seeks to examine the impact of price, satisfaction, alternative attractiveness and the MNP-induced self-efficacy on university students' intentions to switch service providers in Malaysia.

Hypotheses:

H1: There is a positive relationship between price and intention to switch.

H2: There is a negative relationship between satisfaction and intention to switch.

H3: There is a positive relationship between alternative attractiveness and intention to switch.

H4: There is a positive relationship between the MNP-induced self- efficacy and intention to switch.

This study offers insights into the university students' provider-switching behaviour, helping the service providers develop better marketing and retention strategies to attract and keep this tech-savvy, competitive, demographic market. The results for path coefficient are shown in Figure 1.
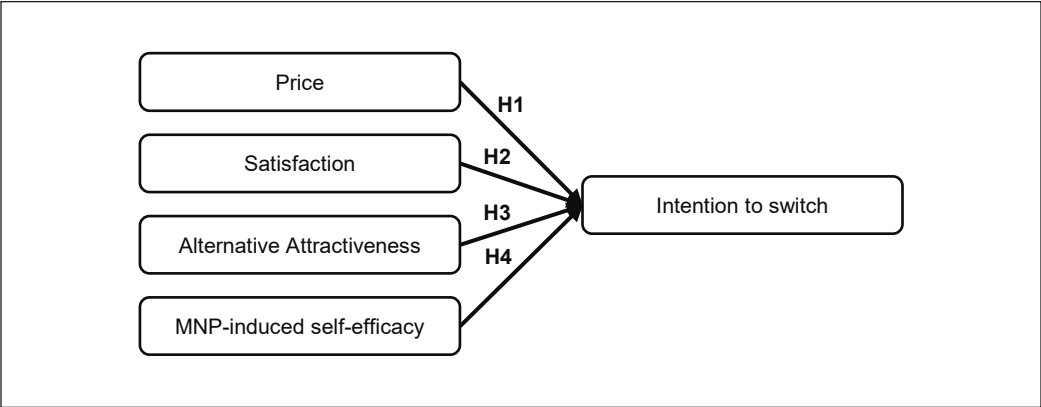
Figure 1. Conceptual framework of factors affecting service provider switching intention

CONCLUSION

This study identifies key factors influencing university students' decisions to switch mobile service providers, including pricing, satisfaction, alternative options, and mobile number portability. It emphasises the need for service providers to adopt flexible pricing, improve satisfaction, and innovate. Policymakers can use these insights to foster fair competition and protect consumer choice.

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Factors Affecting Millennials Preference Towards Airbnb Accommodation in Klang Valley, Malaysia

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ABSTRACT

Airbnb is an online marketplace that allows individuals to rent out their homes and other properties to travellers seeking accommodation. Over the past few years, the Airbnb has experienced rapid growth, with demand consistently increasing. Despite this, research on Airbnb preferences remains relatively new, as previous studies primarily focus on various motivational factors for choosing Airbnb. This study aims to identify the impact of economic benefits, social benefits, functional attributes, and experiences on Millennials' preferences towards the Airbnb. Using a cross-sectional research design, a purposive sampling technique was employed to target respondents. A self-administered survey was distributed among groups of Millennials in Klang Valley who have experience staying at the Airbnb. Responses from 237 participants were analysed using the Multiple Regression analysis in SPSS. The research findings indicated that economic benefits, social benefits, functional attributes, and experiences significantly impact the Millennial preferences towards the Airbnb. By identifying the impact of these factors, this research provides better understanding to the Airbnb's marketers to tailor their offerings to better meet the needs of this demographic segment. In conclusion, the study highlights the importance of economic and social benefits, functional attributes, and unique experiences in shaping the Millennials' preferences for the Airbnb. These insights can be utilised to enhance customer satisfaction and loyalty, ultimately supporting the continued growth and success of the Airbnb in the competitive accommodation market.

Keywords: Airbnb preference, economic benefits, functional attributes, millennials, social benefits

INTRODUCTION

Accommodation has typically been the largest and fastest-growing tourism subsector (Kuhzady et al., 2020). Accommodation, attractions, accessibility, and facilities are

essential to tourism. As one of the facilities, lodging is crucial to tourism. Business lodging includes hotels, resorts, inns, condos, Airbnb, etc. (Primadewi et al., 2021).

The Airbnb and other sharing economy and online marketplace accommodations are now competing with conventional lodging (Kuhzady et al., 2020). The Airbnb is a recognised online marketplace for listing, discovering, and booking unique accommodations worldwide (Zervas et al., 2021). The Airbnb makes internet housing rentals easy and affordable. The Airbnb offers single rooms, shared rooms, houses, and apartments. The host may or may not live with the guests. The "bed and breakfast" theme remains (Guttentag, 2016). The Airbnb website (www.airbnb.com) is simple and resembles traditional accommodation booking websites like Expedia: one searches based on destination, travel dates, and party size; the website returns a list of available spaces that can be refined by price, neighbourhood, and amenities; and then individual listings can be selected for more detail, with a description, photos, and guest reviews.

As the Airbnb becomes more popular in Malaysia, this study explores what makes the Millennials choose the Airbnb over other lodgings and whether there is a correlation between issues and the Airbnb as their first choice. Thus, this study may help explain how social benefits, experiences, economic benefits, and functional features affect the millennials' Airbnb vacation housing preferences.

PROBLEM STATEMENT

The sharing economy, particularly platforms like the Airbnb, has significantly impacted the travel and lodging industries. The Millennials, with their unique purchasing habits and technological prowess, are driving this shift. The Airbnb, a digital marketplace for accommodations, connects hosts with guests in exchange for monetary transactions. With over 7 million locations and 220 countries, it offers lower prices than traditional hotels. As the leading operator of short-term rentals, the Airbnb has gained significant attention and debate globally (Hati et al., 2021). Understanding the factors driving millennials to choose the Airbnb over traditional hotels is crucial for hospitality businesses to adapt and improve their services.

The Airbnb, despite its success, has faced criticism for its negative effects on property prices, traditional accommodation, and revenue generation.

This study highlights the impact of perceived value on the Airbnb accommodations selection, suggesting future research should focus on specific dimensions of value in different markets. It also emphasises the importance of assessing reduced value on consumer motivation and understanding how features like ease and ambiance influence purchase intentions. The study aims to investigate factors influencing the millennials' preferences for the Airbnb in Klang Valley, Malaysia.

RESEARCH QUESTIONS

To further this study's objective, we provide the following research questions:

1. What is the significant effect of economic benefit on preference for choosing the Airbnb among the millennials in Klang Valley?
2. What is the significant effect of functional attributes on preference for choosing the Airbnb among the millennials in Klang Valley?
3. What is the significant effect of social benefits on preference for choosing the Airbnb among the millennials in Klang Valley?
4. What is the significant effect of experiences on preference for choosing the Airbnb among the millennials in Klang Valley?

Table 1 below shows the result for the reliability test analysis. The analysis indicates that all variable are reliable due to the Cronbach Alpha are valued above 0.7.

Figure 1 demonstrates the relationship between economic benefits, functional attributes, social benefits, and experiences toward the millennials' preferences for the Airbnb in Klang Valley, Malaysia.

Table 1
Reliability test analysis

Variable	Cronbach Alpha (α)	Decision
Millennials Preferences	0.948	Reliable
Economic Benefits	0.931	Reliable
Functional Attributes	0.935	Reliable
Social Benefits	0.913	Reliable
Experiences	0.931	Reliable

Source: So et al. (2021)
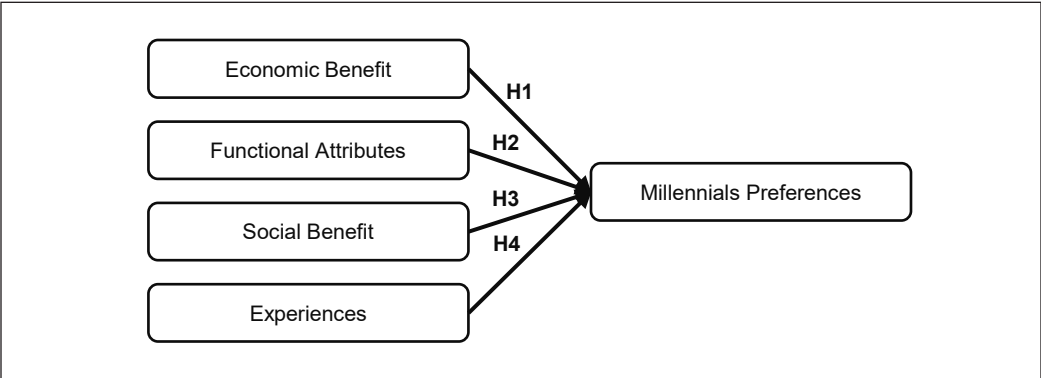
Figure 1. Conceptual framework adapted from Tran and Filimonau (2020)

CONCLUSION

Using the multiple regression analysis, the study indicates that economic benefits, social benefits, functional attributes, and experience strongly influence the millennials' Airbnb preferences. In particular, this data helps explain how young travellers acquire the Airbnb trips online. Its findings can assist the Airbnb researchers and administrators make better decisions and tactics. This chapter also contributes to travel research by emphasising the importance of unique accommodations and variation in the Airbnb accommodation, helping us understand why the Airbnb is so popular. This study exclusively included the millennials, which is crucial because younger people are more likely to use the sharing economy (Tussyadiah & Pesonen, 2016). Tussyadiah and Pesonen (2016) found no significant age disparities between the Airbnb users and nonusers, however it would be interesting to study the demographic characteristics like the Airbnb accommodation users' ages. Further research could examine whether different age groups use this type of lodging for different reasons. This study sheds light on the millennial visitors' Airbnb purchases, providing information for researchers and managers of P2P accommodation services. It also contributes to tourism literature by considering the Airbnb's unique and varied accommodations.

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Determinants of the Capital Structure in Shariah-Compliant Financially Distressed Firms

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ABSTRACT

This study examines the factors influencing the capital structure in Shariah-compliant and financially distressed firms, focussing on the long-term debt-to-equity (LTDE). Given the Shariah restrictions on interest-bearing debt and the financial constraints of distressed firms, understanding their financing decisions is essential. Using the dynamic panel data analysis on 75 firms (374 firm-year observations), the study evaluates eight key factors: liquidity, profitability, efficiency, growth opportunities, asset tangibility, corporate governance, firm size, and political connections. The dynamic approach enhances accuracy and addresses endogeneity. Results show that past financing decisions (lagged LTDE) and profitability positively impact the LTDE, suggesting firms maintain previous debt levels and use debt when the firms are in a profitable position. Other factors, including liquidity, growth opportunities, asset tangibility, firm size, and corporate governance, show no direct impact, though corporate governance indirectly influences financing decisions. These findings provide insights into how Shariah-compliant and distressed firms manage the capital structure. The study contributes to the Islamic finance and corporate financial distress research, offering practical implications for policymakers, investors, and financial institutions in enhancing financial stability.

Keywords: Capital structure, financially distressed firms, Islamic finance and leverage, shariah-compliant firms

INTRODUCTION

Capital structure remains a central topic in corporate finance, with ongoing debates about its determinants (Bui & Nguyen, 2021). Despite extensive research, no single theory fully explains the capital structure choices due to the firm-specific and macroeconomic variations (Chadha et al., 2021). This study examines the long-

term debt-to-equity ratio (LTDTE) in Shariah-compliant and financially distressed firms, considering their distinct financial constraints. The Shariah-compliant firms follow the Islamic finance principles, avoiding interest-based transactions and excessive debt, with the Malaysia's Securities Commission enforcing strict compliance (Lee & Isa, 2023). Financial distress, on the other hand, reflects a firm's difficulty in meeting obligations, often requiring restructuring (Bhutta et al., 2020). Given the Malaysia's advanced Islamic financial system, it serves as an ideal setting for this study (Saba et al., 2020). The research hypothesises that the financial distress and Islamic finance principles significantly shape the capital structure decisions. By adopting a dynamic approach, this study deepens the understanding of the capital structure determinants, offering insights for policymakers, investors, and corporate leaders.

DETERMINANTS OF CAPITAL STRUCTURE

Several factors shape a firm's capital structure, including liquidity, firm size, profitability, efficiency, growth opportunities, asset tangibility, corporate governance, and political connections. High liquidity reduces debt reliance (Opler et al., 1999), but distressed firms may hoard cash for stability (Almeida et al., 2004). Larger firms generally have better debt access, though in distressed cases, cash flow stability is more critical than size. Profitability encourages internal funding (Myers & Majluf, 1984), but tax advantages make debt attractive (DeAngelo & Masulis, 1980). More efficient firms borrow less, while weaker firms depend more on debt (Hovakimian et al., 2001). High-growth firms prefer equity financing (Myers, 1977), but distressed firms may still seek debt despite lender reluctance (Aivazian et al., 2005). Asset tangibility supports borrowing, but Shariah-compliant firms follow risk-sharing principles instead of collateral-based lending (Abdullah & Tursoy, 2021). While corporate governance enhances financial management (Shleifer & Vishny, 1997), its influence weakens in distressed firms (Ghosh, 2007). Politically connected firms gain easier access to debt (Faccio, 2006), though excessive reliance can lead to inefficiencies. These factors influence the capital structure differently, especially in Shariah-compliant and distressed firms, warranting further research.

METHODOLOGY

This study explores the factors influencing the capital structure in financially distressed Shariah-compliant firms, using the long-term debt-to-total-equity ratio (LTDTE) as the dependent variable. The independent variables include liquidity (LIQ), firm size (SIZE), profitability (PROF), efficiency (EFF), growth opportunities (GROW), asset tangibility (TANG), corporate governance (CG), and political connections (PC). To analyse these relationships, the study applies the System Generalised Method of Moments (System GMM), a dynamic panel data approach that addresses endogeneity and improves estimation

efficiency (Blundell & Bond, 1998). A variable selection technique (Lindsey & Sheather, 2010) is used to refine the model by retaining only significant factors.

FINDINGS AND DISCUSSION

This study explores the factors influencing the capital structure in Shariah-compliant firms, using data from 75 firms listed under PN4, PN17, and APN17 of Bursa Malaysia. The focus is on the long-term debt-to-equity ratio (LTDTE) as the key measure. Initially, eight factors were considered, but after applying the variable selection technique, six remained: liquidity, profitability, growth opportunity, firm size, asset tangibility, and corporate governance. Political connections and efficiency were excluded due to their insignificant impact on the LTDTE. A dynamic model was chosen over a static one, with the System GMM being used for its ability to reduce bias and improve estimation efficiency. Findings show that past leverage (LTDTE) and profitability significantly influence the LTDTE. Firms with higher past debt tend to maintain high leverage, supporting the dynamic trade-off theory. Profitable firms also take on more debt to maximise tax benefits (Myers, 1977). However, liquidity, growth opportunity, asset tangibility, firm size, and corporate governance had no significant impact. The results suggest that distressed firms prioritise short-term liquidity (Opler et al., 1999), while creditors hesitate to fund their growth opportunities (Myers & Majluf, 1984). Asset tangibility has little effect, as Shariah-compliant financing does not rely solely on collateral (Abdullah & Tursoy, 2021). Firm size does not guarantee easier debt access, as creditors prioritise cash flow over size. Corporate governance appears weak in distressed firms, reducing its influence on debt decisions (Ghosh, 2007). Overall, while the capital structure theories apply to stable firms, their impact is less pronounced in Shariah-compliant, financially distressed companies.

CONCLUSION

This study examines the factors influencing the capital structure in Shariah-compliant, financially distressed firms in Malaysia, using a sample of 75 firms. Key variables being analysed include liquidity, profitability, efficiency, growth opportunities, asset tangibility, firm size, corporate governance, and political connections. The results indicate that lagged debt ratios and profitability significantly affect the long-term debt-to-equity ratio (LTDTE). Corporate governance also plays a crucial role, with stronger governance linked to higher LTDTE. Firms with growth opportunities tend to rely more on long-term financing. However, liquidity, firm size, and political connections show no significant impact. While this study provides valuable insights, some limitations exist. The reliance on specific financial data may introduce bias, and the 2018-2022 timeframe may not capture long-term trends. Future research should consider wider datasets, multiple economic cycles, and alternative financial or industry-specific variables for a deeper understanding of capital structure in these firms.

ACKNOWLEDGEMENT

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Antecedents of Electronic Word-of-Mouth Intention for Heritage Tourism Destinations in Kuala Lumpur

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ABSTRACT

Research on behavioural intentions in heritage tourism is relatively new, requiring more focus to deepen understanding. This study examines key factors influencing the tourists' electronic word-of-mouth (eWOM) intentions in heritage tourism. Using a cross-sectional design, 203 surveys were gathered from local tourists who visited heritage sites in Kuala Lumpur, including Dataran Merdeka, the National Monument, and the Sultan Abdul Samad Building. The Structural Equation Modelling through the Partial Least Squares (PLS-SEM) technique reveals that visitor engagement, destination image, destination authenticity, and visitor trust are significant antecedents driving the tourists' eWOM intentions in heritage tourism. These findings provide valuable insights for marketers and heritage destination managers, emphasising essential factors for encouraging the eWOM activities. Such online sharing is crucial as it influences potential tourists' visit intentions, supporting the destination's growth, and sustainability. This study contributes in advancing the heritage tourism strategies by identifying critical elements that can enhance visitor experiences and encourage positive, influential eWOM behaviour among tourists.

Keywords: Authenticity, destination image, eWOM, heritage tourism, tourist intentions

INTRODUCTION

The emergence of social media and digital platforms has also given rise to electronic Word-of-Mouth (eWOM). Generally, the eWOM is associated with the tourists' experience-sharing activities, whether positive or negative, with others via online platforms. It widely refers to interpersonal and non-commercial communication between consumers or internet users

regarding their experiences with a service, brand, destination, or organisation (Mohamad et al., 2022).

PROBLEM STATEMENT

Nowadays, the eWOM is recognised as a significant component of the tourists' behavioural intentions. However, research on the behaviour of heritage tourists remains inadequate and requires clearer attention for better understanding. The literature shows that predictors for the tourists intention to perform the eWOM, particularly for heritage tourism, have received little attention from previous scholars (Khan et al., 2024). Previous study on heritage products mainly focussed on sustainability, including strategies and practices to protect heritage destinations from social, economic, and environmental perspectives (Pandey & Sahu, 2020). However, little attention has been given to the eWOM as a primary outcome of behavioural intention (Pandey & Sahu, 2020). Thus, the aim of this study is to identify the influence of visitor engagement, destination authenticity, destination image, and visitor trust on the eWOM intentions among local tourists.

These antecedents are significant as they reflect the tourists' emotions, cognitive engagement, and involvement with heritage sites. Primarily, they contribute to positive perceptions and experiences, encouraging the visitors to share their experiences and thoughts on various digital platforms, ultimately recommending and promoting the heritage destinations (Aditya & Piartrini, 2023; Chu et al., 2023; Seyfi et al., 2024).

RESEARCH QUESTIONS

This study highlight two main research questions:

RQ1: What are the antecedents of the tourists' eWOM intention towards heritage tourism destinations in Kuala Lumpur?

RQ2: What is the most significant antecedent of the tourists' eWOM intention towards heritage tourism destinations in Kuala Lumpur?

Table 1 demonstrates the results of the reliability test conducted among 203 respondents.

The Partial Least Squares Structural Equation Modelling (PLS-SEM) technique was implemented to conduct an inferential statistical analysis. The research hypotheses were tested by following the assessment procedures for both models known as the reflective and structural. The evaluation towards the reflective measurement model revealed that all constructs were well above the limits including the Cronbach alpha (α),

Table 1
Reliability test analysis

Variable	Alpha	Decision
Destination Authenticity	0.901	Reliable
Destination Image	0.899	Reliable
eWOM Intention	0.883	Reliable
Visitor Trust	0.891	Reliable
Visitor Engagement	0.936	Reliable

Source: Rasoolimanesh et al. (2021)

composite reliability (CR), factor loading (λ) and AVE values for. Analysis on cross-loading value indicated that the discriminant validity was achieved since all indicators were loaded in its own construct (Hair et al., 2014).

An analysis also indicated that all the antecedents exhibited no collinearity issues, as the Variance Inflation Factor (VIF) value for each antecedents was below five. Additionally, an analysis of the coefficient of determination (R^2) revealed that the constructs of visitor engagement, destination authenticity, destination image, and visitor trust can jointly explain 63.5% ($R^2 = 0.635$) of the variance on the eWOM intention. These results indicate that all the antecedents have moderate to strong R^2 values in relation to the construct of the eWOM intention.

The path analysis revealed that all antecedents influence the endogenous construct significantly. Figure 1 illustrates the structural model, which displays the influence of visitor engagement, destination authenticity destination image, and visitor trust on the endogenous construct of the eWOM intention in heritage tourism.
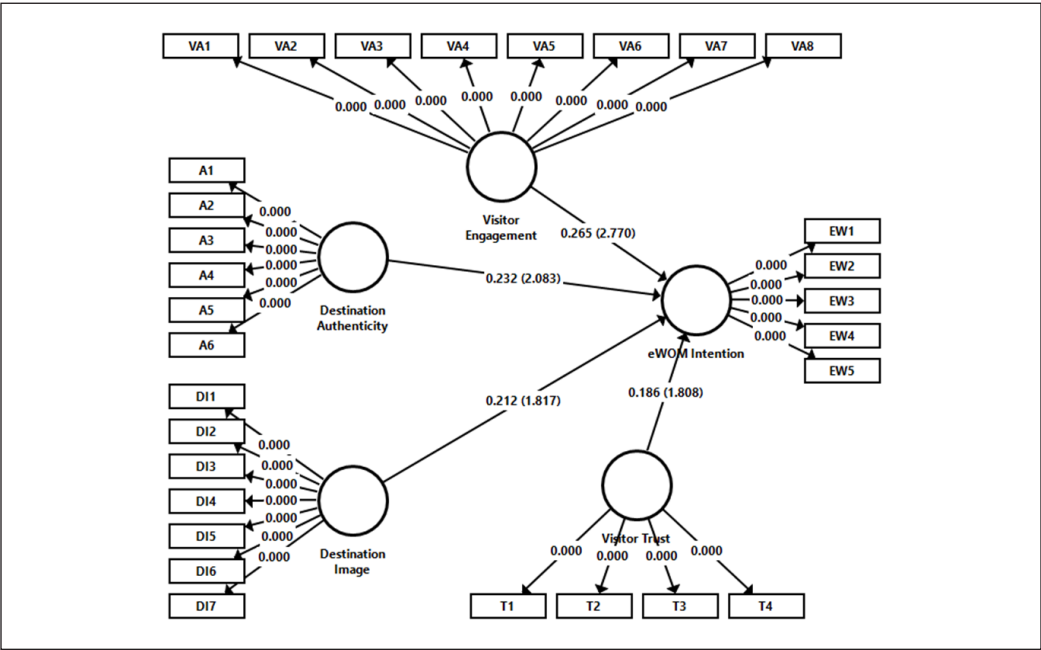
Figure 1. Structural model (Rasoolimanesh et al., 2021)

CONCLUSION

In conclusion, the research findings highlight the importance of digital media in heritage tourism destination marketing. As tourists increasingly rely on social media to gather and share information about destinations, the heritage tourism marketers are encouraged to deepen their understanding of social media's nature and its potential to influence the

tourists' behaviours. It is essential for marketers to carefully manage their social media strategies to ensure they provide accurate, engaging, and culturally sensitive content that aligns with the values and uniqueness of the heritage sites they promote.

ACKNOWLEDGEMENT

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Determinants of Employee Readiness for Industrialised Building System (IBS) Adoption in Construction Projects

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ABSTRACT

In the building sector, the Industrialised Building System (IBS) improves productivity, quality assurance, and sustainability. However, because of workforce issues, its implementation in Malaysia is still uneven (CIDB, 2024). With an emphasis on knowledge, training and development, organisational support, and IBS performance, this study examines at important factors that influence an employee's willingness to adopt the IBS. Regression analysis of a survey of 150 industry professionals showed that these characteristics contributed to 30.7% of the variance ($R^2 = 0.307$), indicating a considerable influence on IBS acceptability. The results show that in order to develop a workforce ready for the IBS implementation, organised training programmes and robust organisational support are essential.

Keywords: IBS performance, knowledge, organisational support, training and development

INTRODUCTION

A contemporary response to the inefficiencies of conventional building techniques, the Industrialised Building System (IBS) was first implemented in the 1960s to alleviate the housing scarcity (Alawag et al., 2023; Saberi et al., 2022). The IBS implementation in Malaysia's construction sector increased from 10% in 2000 to about 40% in 2020 (CIDB, 2024). However, because of employee resistance, productivity gains continue to be inconsistent. The successful deployment of the IBS depends on the employees' readiness.

PROBLEM STATEMENT

Employee unreadiness related obstacles such skill gaps, change aversion, and a lack of organisational support keep the IBS implementation below optimal levels (Alawag et al., 2023; Lee & Lim, 2023). According to a CIDB (2024) study, employees resistance prevents only 30% of projects from completely implementing the IBS.

RESEARCH OBJECTIVE

To investigate the key factors influencing employees' readiness and engagement with the IBS in the Malaysian construction industry.

LITERATURE REVIEW

The variables chosen in this study, namely employees' knowledge (EK), training and development (T&D), organisational support (OS), and IBS performance (IBSP) are based on extensive literature highlighting critical role in the employees' readiness of the Industrialised Building System (IBS).

Employee Readiness

Employee readiness is the degree to which people are psychologically and technically equipped to accept change and successfully implement new systems or technology in the workplace (Armenakis et al., 2002; Ismail et al., 2019).

Employee Knowledge

One of the main factors affecting employees' willingness to embrace the system is their level of understanding regarding the IBS. Research indicates that employee resistance may result from a lack of knowledge and comprehension of the IBS advantages, construction methods, and cost effectiveness (Ismail et al., 2019). Employees with higher knowledge levels tend to have a positive attitude towards the IBS (Razak & Awang, 2014).

> Hypothesis 1: Knowledge significantly influences employees' readiness of the IBS application.

Training and Development

Training programs are critical for providing staff with the skills they need to effectively use the IBS technology. Training lowers ambiguity and increases trust in the IBS implementation (CIDB, 2024).

> Hypothesis 2: Training and development significantly influence employees' readiness of the IBS application.

Organisational Support

Organisational support, including management and employee commitment, increases the likelihood of accepting the IBS if employees experience significant support from their organisation (Ministry of Works Malaysia, 2023). Previous study has demonstrated that a lack of organisational support leads to employee resistance.

Hypothesis 3: Organisational support significantly influences employees' readiness of the IBS application.

IBS Performance

Employee views on the adoption of the IBS are influenced by its perceived performance, which includes sustainability, efficiency, and quality control (Musa et al., 2015). Employees are more likely to integrate the system and work more effectively if employees understand the advantages of the IBS in building projects.

Hypothesis 4: The IBS performance significantly influences employees' readiness of the IBS application.

The result of the regression test analysis is shown in Table 1.

Table 1
Regression test analysis

Independent Variable	Beta (β)	Significant Value	Remarks
IBS Performance (IBSP)	0.249	0.021*	Supported
Employee Knowledge (EK)	0.239	0.018*	Supported
Training and Development (T&D)	0.247	0.013*	Supported
Organisatonal Support (OS)	-0.219	0.017*	Supported
R Square	0.307		
Adjusted R Square	0.271		

Note. N=122, **p<0.01, *p<0.05; dependent variable = employee readiness (EA)

Table 1 of the regression test analysis showed that all independent variables had a statistically significant relationship with employee readiness. Employee readiness of the IBS was significantly influenced by variables such as the IBS performance ($\beta = 0.021$), employee knowledge ($\beta = 0.018$), training and development ($\beta = 0.013$) and organisational support ($\beta = 0.017$).

CONCLUSION

Knowledge dissemination, training programmes and organisational support are key drivers of employee readiness towards the IBS. Future research should explore additional socio-cultural factors influencing the IBS readiness.

ACKNOWLEDGEMENT

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Precarious Work in Malaysia: Definition, Characteristics, Challenges, and Impacts

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ABSTRACT

This paper examines about precarious work in Malaysia from 2018-2023, characterised by non-standard employment with volatility, insecurity, and reduced benefits. Analysis shows demographic variations across the precarious work types with millennials overrepresented. Most precarious workers fall within the B40 income bracket, indicating economic vulnerability. Challenges include limited access to employment rights, power imbalances in employer-employee relationships, and negative impacts on mental health. The findings emphasise the necessity for targeted interventions addressing both sector-specific challenges and demographic-specific needs within Malaysia's evolving labour market.

Keywords: Challenges, characteristics, impacts, labour market, Malaysia, precarious work

INTRODUCTION

Work and employment have transformed globally due to technology, economic restructuring, and COVID-19 (Rahman et al., 2021), leading to increased precarious work—characterised by uncertainty, instability, and limited social protection (Kalleberg & Hewinson, 2013). The ILO identifies eight forms: agency work, temporary work, contracting out, casual work, seasonal work, home-work, self-employment, and part-time work, typically

lacking standard benefits and creating job insecurity (ILO, n.d.). The precarious work spans four dimensions: temporal, organisational, economic, and social protection (Koranyi et al., 2018; Moore et al., 2018; Matilla-Santander et al., 2019). Allan et al. (2021) found that social and economic marginalisation influences its prevalence, undermining job attitudes, behaviours, and mental health. EPRES measurements revealed associations between precariousness and job stress, with higher prevalence among workers aged 25-34 and minorities (Bhattacharya & Ray, 2022). While primarily associated with gig workers who face structural inequalities (Huang et al., 2020; Uchiyama et al., 2022), the precarious work exists across formal and informal sectors, particularly affecting women, workers of colour, and migrants (ILO, n.d.; Schneider, 2002). Non-traditional employment is not necessarily precarious if protected by the legislation or collective agreements (EMF, 2008), though Perri (2024) found significant mental health impacts on workers and families. Malaysian research has focussed mainly on migrants (Au et al., 2019; Nungsari et al., 2020; Sunam, 2023) with limited studies on Malaysians. Despite the Employment Act 1955 amendments, many workers remain unprotected due to independent contractor classifications. This review examines the precarious work definitions, characteristics, challenges and impacts in Malaysia, synthesising knowledge for policymakers while establishing foundations for future intervention research.

METHODS

This review employed qualitative literature analysis to examine the precarious work among Malaysian workers. Initial searches in Scopus yielded only two relevant articles, prompting additional searches in Google Scholar. No restrictions were placed on publication year or language to maximise inclusion of relevant studies. Despite this comprehensive approach using specified keywords, only five research papers focussing on precarious work among Malaysian workers in the Malaysian context were identified for review.

DISCUSSION

Definitions of Precarious Work

Izharuddin (2018) defines the precarious work as unstable, low-pay freelance jobs, using "academic precariat" to describe underclass academic workers with lower status, reduced benefits, limited security, and less institutional power than permanent faculty. Even full-time positions can be precarious when lacking health benefits, facing unrealistic performance metrics, or experiencing employment insecurity. Norashikin et al. (2018) used "precarious work behaviour" for conduct related to non-regular employment including part-time work, short-term contracts, and self-employment. Similarly, Jalil et al. (2023) define the precarious work as any non-standard employment marked by unpredictability and insecurity. Nor

(2022) characterises the precarious employment by income vulnerability, lack of contracts, and limited social protection. Siew et al. (2023) included gig workers (food delivery drivers, freelancers, e-hailing drivers) in this category, noting their increase due to internet platforms and job flexibility. In the Malaysian context, the precarious work is defined as non-standard employment characterised by instability, insecurity, and reduced benefits compared to traditional positions, classified by employment structure, economic factors, job security, and benefits/rights. Recent studies highlight digital platforms' influence in creating new precarious employment types.

Characteristics of Precarious Workers

The literature shows significant demographic diversity in the precarious work across Malaysia. Izharuddin (2018) identified various academic contingent workers (lecturers, assistants, tutors) facing minimal compensation and job insecurity. Quantifying these workers remains challenging due to inconsistent hiring practices. Research by Norashikin et al. (2018) revealed millennials as particularly vulnerable, with participants being predominantly female (70%), Malay (80%), and degree holders (61%). Unlike previous generations, millennials are more frequently engage in the precarious work arrangements. Other studies identified distinct demographic patterns: Nor (2022) found 60% of single mothers worked in the informal sector, Jalil et al. (2023) noted precarious workers were mainly women (66.4%), Chinese (54.9%), and unmarried (51.2%), with 79.6% in the B40 income bracket. Siew et al. (2023) revealed gig workers were typically young males (87%) working as food delivery drivers. These findings demonstrate gender segregation patterns across the precarious employment, millennial overrepresentation, and prevalent economic vulnerability, suggesting interventions should be tailored to specific demographic groups.

Challenges and Impacts of Precarious Work

The precarious workers in Malaysia face multifaceted challenges across various sectors. Izharuddin's (2018) research with freelance academics revealed unsustainable employment, unpredictable income, and fewer rights than permanent staff, causing anxiety and stress. These workers were ineligible for standard benefits and experienced marginalisation through unequal treatment. Norashikin et al. (2018) found limited access to basic employment rights—only 26.2% believed they could take annual leave and 5.4% sick leave. While 57.2% reported salaries covering basic needs, only 34.5% could manage unexpected expenses. Despite 63.2% not fearing to demand better conditions, 32.9% feared termination for refusing tasks. Nor (2022) identified education limitations and caregiving responsibilities restricting single mothers' employment prospects. Jalil et al. (2023) demonstrated job insecurity negatively affected psychological well-being, mediated by work-life balance. Siew et al. (2023) revealed B40 gig workers experienced poor psychological well-being,

with 40% citing low income as the primary factor, alongside inadequate social support and work-life balance. These studies consistently show rights deprivation, mental health impacts, and power disparities between precarious workers and employers, creating vulnerability despite theoretical rights to improved conditions.

CONCLUSION

A review of Malaysian precarious work literature reveals complex phenomena evolving with technology and laboor market shifts. Precarious work now extends beyond temporary employment to various non-standard arrangements. Effects vary demographically, with millennials prominently represented in unstable employment and economic vulnerability concentrated in the B40 income group. Educational levels and family responsibilities significantly influence the precarious work engagement. Key challenges include lack of basic employment rights, power imbalances between workers and employers, mental health impacts, and poor work-life balance. The precarious work represents a multifaceted social phenomenon with significant consequences for individuals and Malaysian society, requiring targeted interventions as digital economies grow to ensure equitable development.

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Navigating Economic Crises: A Comparative Analysis of Budgetary Responses in ASEAN Countries

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ABSTRACT

This scoping review examines the budgetary responses of several ASEAN countries to economic crises, focussing on the contrasting strategies of expansionary fiscal policies and austerity measures. While expansionary policies aim to stimulate economic recovery through increased spending and tax cuts, they raise concerns about long-term fiscal sustainability. Conversely, austerity measures can stabilise public finances but often lead to economic contraction and social unrest. The study highlights the complexities and trade-offs involved in these strategies, emphasising the need for a nuanced understanding of their effectiveness in diverse contexts. By analysing existing literature and government measures implemented during crises, this review aims to inform future policymaking and enhance economic resilience in the ASEAN region, contributing to the goals of the ASEAN Community Vision 2025.

Keywords: Budgetary responses, economic crisis, government strategies

INTRODUCTION

Economic crises, such as the 2008 global financial crisis and COVID-19 pandemic, have prompted governments worldwide to adopt various budgetary responses. These responses can be broadly categorised into two strategies: expansionary fiscal policies (increasing spending or cutting taxes) and austerity measures (reducing spending or

increasing taxes). Effective fiscal policies are crucial in stabilising economic activity, supporting employment, and promoting social equity during downturns.

The Expansionary Fiscal Policies involve increasing government spending and cutting taxes to stimulate economic activity. Research indicates that such measures can lead to faster recoveries during recessions (Blanchard & Leigh, 2013; Romer & Romer, 2010).

The Austerity Measures focus on reducing deficits through spending cuts and tax increases. While aimed at restoring fiscal balance, austerity often leads to economic contraction and social unrest, particularly in high-debt contexts like Greece and Brazil (Alesina et al., 2019).

PROBLEM STATEMENT

Budgetary responses play a crucial role in managing economic crises, yet their effectiveness varies significantly across countries and contexts. Austerity measures can stabilise public finances but often lead to economic contraction and social unrest, while expansionary policies may support recovery at the cost of fiscal sustainability. Understanding these nuances is essential for guiding future government actions and enhancing economic resilience.

RESEARCH QUESTIONS

What existing literature maps the government budgetary responses to economic crises in several ASEAN countries? The results of the scoping review, by utilising secondary data collection through library research, are shown in Table 1.

Table 1

Comparative analysis of economic strategies in several ASEAN countries

Country	Fiscal Strategy	Government Key Measures
Malaysia	Expansionary Policy	Prihatin Rakyat Economic Stimulus Package during the COVID-19 pandemic, cash transfers and support for SMEs to stimulate recovery and maintain consumer confidence (Ministry of Finance Malaysia, 2020)
Indonesia	Expansionary Policy with Austerity	National Economic Recovery Program (PEN) involved a mix of fiscal stimulus and social assistance programmes to alleviate the economic burden on vulnerable populations (World Bank, 2020)
Thailand	Expansionary Policy with Austerity	Economic and Social Relief package, wage subsidies and cash handouts for low-income families (International Monetary Fund, 2021)
Philippines	Expansionary Policy with Austerity	Bayanihan to Heal as one Act, Bayanihan 2 Act (Bureau of the Treasury, 2020a, 2020b) and Cash assistance through the Social Amelioration Programme (SAP) (Department of Finance, 2020)
Singapore	Expansionary Policy	Job Support Scheme (JSS), direct cash transfers and digital transformation (Ministry of Finance Singapore, 2020)

Source: Authors' own work

CONCLUSION

This review underscores the trade-offs governments encounter in choosing budgetary strategies during economic crises, highlighting that while expansionary fiscal policies can foster recovery, they may jeopardise long-term sustainability. Conversely, austerity measures can stabilse public debt but often result in economic contraction and social distress. Addressing these complexities is essential for enhancing the understanding of effective budgetary strategies in ASEAN, ultimately contributing to the regional stability and ASEAN Community Vision 2025.

ACKNOWLEDGEMENT

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Discovering the Landscape of Waqf Financing: A Bibliometric Analysis

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ABSTRACT

This study uses the Scopus database to conduct a comprehensive bibliometric assessment of academic papers on waqf financing. The data was analysed using the Microsoft Excel, Open Refine, and VOSviewer. Since 2009, there has been an increase in the number of research articles released on waqf financing. Malaysia has emerged as the most prolific country in terms of published waqf finance research. This study's findings are significant to increase the practice and reach of waqf financing globally.

Keywords: Bibliometric, VOSviewer, waqf financing

INTRODUCTION

Islamic social finance has leveraged the current expansion of Islamic economics and finance, as noted by Uluyol et al. (2021). According to Medias et al. (2022), waqf stands as one of the most vital institutions driving socioeconomic growth in the Muslim world. Waqf has the ability to link the Islamic Social Finance (ISF) and Islamic Commercial Finance (ICF) by providing finance for long-term social and economic initiatives including for infrastructure development and education (Syamsuri et al., 2024). The use of the waqf funds for social and economic initiatives can help to strike a balance between commercial and social interests in the financial system, encouraging socioeconomic growth.

Financing is the expenditure of all resources and the ability to develop the basic capital of both material and human resources (Widiastuti et al., 2022). Waqf financing, on the other hand, is an effort made by the waqf

manager to obtain costs to cover waqf investment projects, and that waqf asset financing is how to find money by using waqf resources or looking for external financial sources that can finance the development process of waqf projects according to the Shariah law (Rohman et al., 2021).

This study evaluates past waqf financing literatures through bibliometric analysis method using quantitative and statistical approaches to generate distribution patterns of articles in certain issues and periods (Martí-Parreño et al., 2016). This paper seeks to delve deeper into the current literature on waqf financing, with an emphasis on its role as an Islamic social finance tool with global reach and collaborative potential. Gaining this information is critical for researchers to make informed recommendations for future study on waqf finance.

LITERATURE REVIEW

Over the last few decades, a number of academics have highlighted the role that the Islamic social finance—particularly cash waqf—plays in improving the society's socioeconomic effects. Many studies have been conducted to develop innovations using the cash waqf in order to fulfil the socioeconomic objectives of a community (Aldeen et. al., 2020).

Financing waqf assets aligns with the concepts of muamalat, a traditional Islamic economic empowerment tool (Priyadi et al., 2022). Financing prohibited assets or projects is prohibited, even if the revenues benefit the public or specific groups. Illicit money or riches, including revenues from the sale of spirits and narcotics, cannot be used to fund investment ventures. Financing provides primary, secondary, and tertiary advantages. The waqf assets must be financed in accordance with the Shariah requirements, as the objective is not just to generate income but also to adhere to the Shariah principles.

Earlier academics used several types of the waqf finance, such as combining the old and new waqfs, borrowing, exchanging, hukr (long-term rent with a significant advance payment), and renting with two installments. The waqf land finance strategy is based on three Islamic financial principles: profit sharing/risk (mushārakah), buying and selling (ba'i), and renting (ijārah) (Rohman et. al., 2020).

METHODOLOGY

This study performed a bibliometric analysis, starting with a keyword search for 'waqf' and 'financing' in article titles in the Scopus database. The collection contains all Scopus documents obtained between 2005 and 2024, as of August 26, 2024. The initial search yielded 150 papers relating to waqf funding. Each document was then evaluated based on its title and abstract to confirm its relevance to the study's core topic—waqf finance. Following the screening procedure, 17 documents were eliminated, leaving a final dataset of 133 publications for bibliometric analysis.

This study takes advantage of the Scopus database's analysis function as well as programmes like the Microsoft Excel to create pertinent charts and graphs and perform mathematical computations like the frequency of published documents; OpenRefine to clean, transform, and enrich data; and VOSviewer to map and visualise the bibliometric networks.

RESULTS AND DISCUSSION

The purpose of this study is to evaluate the pattern of waqf financing articles and provide a visual statistical analysis.

Publication by Year

Figure 1 presents the annual publication and total citation trends related to the waqf financing from 2009 to 2024. The cumulative publication growth rate over this period is 0.9979. The earliest contributions were by Mokhtar and Ibrahim (2009), who aimed to raise awareness about the development of waqf assets and share information on financing methods for waqf-based construction and infrastructure projects. Since then, the volume of literature on the waqf financing has steadily increased, with a significant surge observed between 2018 and 2023. This upward trend highlights the growing interest, relevance, and significance of the waqf financing in academic research.
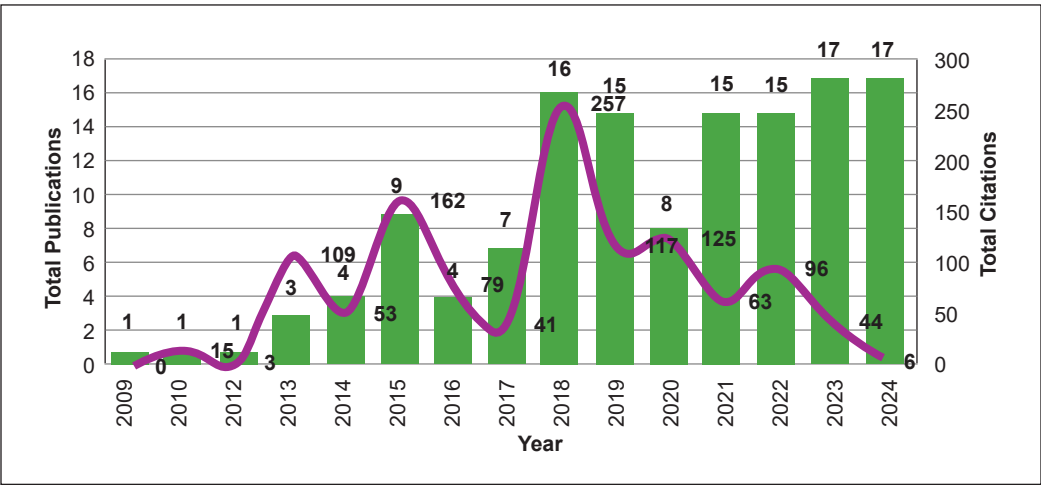
Figure 1. Total publication and total citations by year

Country Network

Figure 2 depicts a nation network analysis, which assesses the collaboration link between various countries in the waqf financing literature. This research sheds light on the top contributing nations and their collaboration practices in the field. To begin, the nation
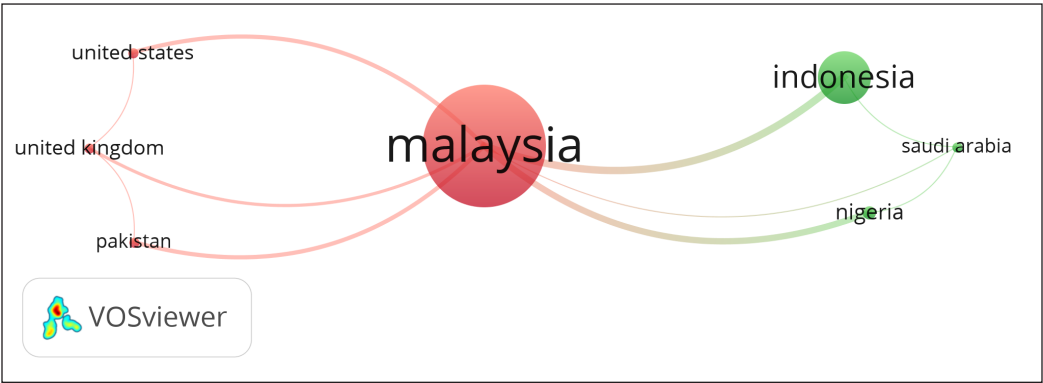
Figure 2. Network visualisation map of co-authorship among countries

network analysis identifies countries that play an important part in the waqf finance literature. In this scenario, Malaysia emerges as a prominent actor, demonstrating high levels of research production and engagement with other countries. This study raises critical questions about the geographic distribution of the waqf funding research, implying the need to involve a broader variety of nations in the waqf financing research.

Keyword Network

The purpose of getting the co-word analysis is to discover the co-occurrence of the terms in order to create clusters and networks based on the Scopus database articles. Figure 3 illustrates the co-occurrences author keywords. Based on the network visualisation map of author keywords, 16 items have been formed with 4 clusters, 54 links, and 108 total link
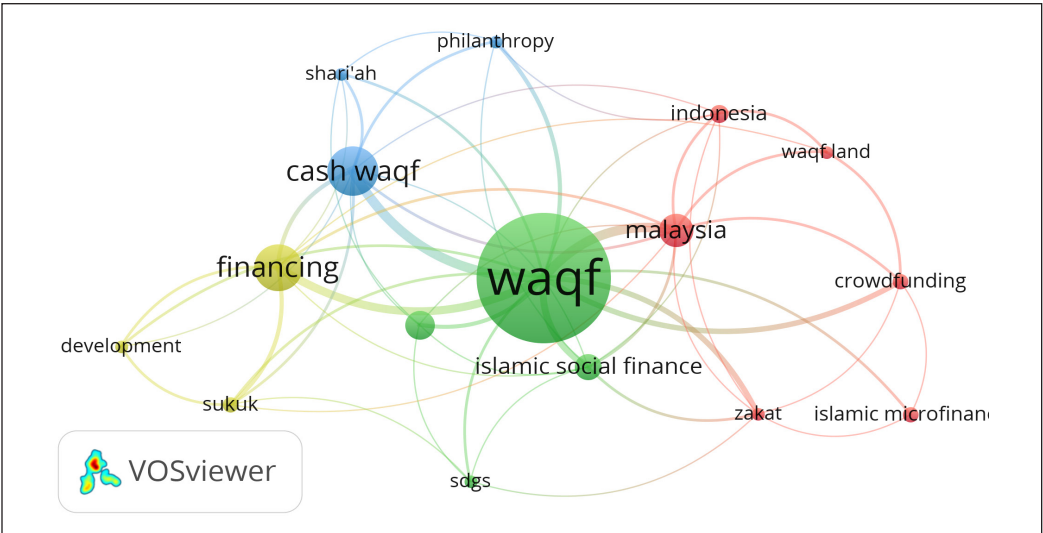
Figure 3. Network visualisation map of co-occurrences network of author's keywords

strengths. Based on Figure 3, it is known that the word waqf is the keyword most commonly associated with other words such as Malaysia, Islamic social finance, crowdfunding, Islamic microfinance, zakat, SDGs, Islamic finance, sukuk, development, financing, cash waqf, shariah, philanthropy, and Indonesia.

CONCLUSION

Due to the relevance of the waqf financing, we intend to provide a complete overview of published literature on the waqf financing using the bibliometric analysis. This bibliometric study is a first step towards a more nuanced understanding of the waqf financing research. The findings from this study could also shed light on the varying research contributions aspects in a specific study field to be used as a guide for researchers in high-impact research production.

This study is not without limitations. Although the bibliometric analysis is a specialised field, some topics require elaboration in order to give the reader with the necessary explanation and enhancement for future reference. This study used the Scopus, a high-quality database, and bibliometric analysis to review the literature on alternative approaches. Future data collection methods may include using databases like Web of Science and Google Scholar.

As a conclusion, this work contributes to knowledge by providing the current research trend in the waqf financing. This study further expands and supplements prior findings on the waqf financing literature by employing a bibliometric methodology and provides valuable insights into historical literature patterns. The results of this study will help scholars identify present gaps in the field of the waqf financing and, more importantly, establish a research agenda for the subject.

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The Masjid-Based Economy Model: Strengthening Local Businesses Through the Islamic Finance

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ABSTRACT

Mosques have long served as centres for social welfare, education, and economic activities in the Muslim communities. Interest in using the Islamic financial tools like zakat and waqf to support local businesses and boost financial inclusion has grown recently. However, the structural and financial challenges often limit their ability to function as sustainable economic hubs. This study explores the Masjid-based economy model as a means of fostering entrepreneurship and market access through the Islamic financial principles. Using a qualitative case study approach, the research examines Malaysian mosques engaged in economic initiatives. Data was collected through semi-structured interviews with mosque administrators, business owners, and community members, along with direct observations of mosque-led activities. Data was analysed using the thematic analysis. Findings reveal that mosques support business sustainability through zakat-funded microfinance, waqf-supported business spaces, and entrepreneurship training. However, issues such as inconsistent funding, weak governance, and scalability constraints hinder long-term impact. The study underscores the need for structured financial integration and strategic partnerships with Islamic financial institutions and policymakers to enhance the sustainability of the Masjid-based economy model. Strengthening governance and collaboration can position mosques as key economic enablers, contributing to financial resilience and sustainable development in the Muslim communities.

Keywords: Entrepreneurship, Islamic finance, local business development, Masjid-based economy, waqf, zakat

INTRODUCTION

Mosques or *masjid,* in Arabic, have historically played a crucial role in the economic and social development beyond their religious functions. In the early Islamic societies, the mosques were not only places of worship but also centres for education, governance, and business transactions (Ahmed, 2021). Today, the Masjid-based economy model builds upon this legacy, proposing that the mosques be leveraged as economic hubs to support local businesses through zakat and waqf distributions, business training, and market facilitation (Abdullah & Othman, 2021).

Despite their potential, mosque-led economic initiatives remain underexplored in academic research. While existing studies focus on the social and educational roles of the mosques, little attention has been given to their structured economic interventions (Ali, 2022). This paper investigates the integration of the Islamic financial tools into mosque-led business initiatives, focussing on case studies from Malaysia.

LITERATURE REVIEW

Islamic Finance and Economic Empowerment

The Islamic financial instruments such as zakat, waqf, and Islamic microfinance provide essential support to small businesses. Zakat redistributes wealth, enabling financially disadvantaged individuals to start businesses, as a means of self-sustaining initiatives to generate their on income instead of relying on charity by local authorities or the public, while waqf properties have been repurposed for entrepreneurial use, creating sustainable revenue streams (Rahman & Shafiq, 2023). The Islamic microfinance, which avoids interest-based lending, offers accessible capital to entrepreneurs who lack conventional banking support (Abdullah & Othman, 2021). These financial tools collectively enhance financial inclusion and business sustainability.

Mosques as Economic Hubs

Beyond religious duties, the mosques historically served as economic and educational centres (Rahman & Noor, 2021). Today, many mosques have expanded their role by organising community markets, offering skill-building workshops, and facilitating zakat-based microfinance (Ali, 2022). The integration of financial and business support within a religious framework fosters trust-based transactions and enhances community engagement.

Community-Based Economic Models

The Masjid-based economy model aligns with the cooperative economic principles that emphasise mutual support and shared prosperity (Ali & Hassan, 2022). However, unlike secular cooperatives, it integrates the Islamic ethics, promoting fair financial practices

and economic justice (Rahman et al., 2023). By leveraging the mosque's position as a trusted institution, this model facilitates financial cooperation, business mentorship, and market accessibility. These initiatives, while fostering entrepreneurship environment on the local community, it also encourages the public to view mosques as more than a place of worship.

METHODOLOGY

This study adopts a qualitative research approach, focussing on case studies of Malaysian mosques involved in economic initiatives. Data collection included semi-structured interviews with mosque administrators, business owners, and community members, as well as direct observations of mosque-based economic activities. Thematic analysis was then used to identify key patterns related to the effectiveness and challenges of implementing the Masjid-based economy model.

RESULTS AND DISCUSSION

Islamic Financial Tools in Business Development

Findings indicate that zakat and waqf funds are increasingly allocated to support business initiatives. Some mosques in Malaysia have successfully established zakat-funded microfinance programmes, offering interest-free loans to small businesses (Rahman & Shafiq, 2023). Additionally, waqf properties have been transformed into marketplaces and training centres, enabling entrepreneurs to access affordable business spaces and resources (Abdullah & Othman, 2021).

Mosques as Business Incubators

Interviews with mosque administrators revealed that entrepreneurship programmes hosted within mosques have improved business sustainability and networking opportunities. Community members reported that mosque-organised markets significantly increased their sales, providing a stable customer base. However, the study also identified challenges, including inconsistent funding and reliance on voluntary management, which limit scalability (Mohamad & Idris, 2022).

CHALLENGES AND RECOMMENDATIONS

Funding Constraints

Although the zakat and waqf provide essential financial support, inconsistent funding poses sustainability challenges. Strengthening partnerships with Islamic financial institutions and government agencies could improve resource allocation and long-term planning.

Lack of Formal Structures

Mosque-led business initiatives often operate informally, leading to inefficiencies. Establishing clear governance policies and accountability frameworks in the management of economic activities can enhance transparency and programme effectiveness.

Scalability Issues

Mosque-led initiatives typically rely on volunteer efforts and community goodwill, which may lead to scalability and sustainability issues. Expanding the Masjid-based economy model requires strategic scaling mechanisms, such as collaborations with Islamic banks and integration into national economic policies.

CONCLUSION

The Masjid-based economy model presents a viable framework to empower local businesses through Islamic financial principles. By offering financial assistance, business training, and market access, the mosques can strengthen economic resilience within the Muslim communities. However, ensuring sustainability requires structured governance, financial partnerships, and policy integration. Future research should explore ways to scale and institutionalise the mosque-led economic initiatives to maximise their long-term impact.

ACKNOWLEDGEMENT

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Strengthening Maritime Security Through the Defence Diplomacy: A Case Study of Malaysia-Indonesia Naval Cooperation Within the ASEAN Framework

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ABSTRACT

Malaysia and Indonesia have high-stakes situations with maritime security due to the strategic position of the Straits of Malacca and Sulawesi Sea. High-level defence diplomacy is critical for regional stability, even more so because both countries have shared threats such as piracy, smuggling, and illegal fishing. This article assesses Malaysia-Indonesia maritime cooperation, especially joint naval exercises, intelligence sharing, and diplomatic initiatives within the ASEAN context. Using a qualitative approach, we conducted six key informant in-depth interviews with senior military officers, policymakers, and security analysts from both Malaysia and Indonesia. Thereby, the study digs into the stakeholders' perceptions of defence diplomacy, defence cooperation, and defence diplomacy's benefit. The academic material believes that bilateral agreements, joint patrols, and coordinated naval exercises like MALINDO JAYA and MALINDO Patrols have enhanced interoperability, maritime threat management, and cross-border trust. However, there are challenges such as cybersecurity risks, inefficiencies in communication, and disparity in resources. While naval diplomacy has strengthened both bilateral defence relations and ASEAN security integration, further modernisation efforts in technology, improvements in intelligence-sharing mechanisms, and the conduction of trilateral and multilateral exercises are required. These enhanced efforts will ensure sustainable maritime security and stability in the longer term in the Southeast Asian region.

Keywords: ASEAN, defence diplomacy, maritime security, naval cooperation, regional stability

INTRODUCTION

Maritime security remains a critical challenge facing Southeast Asia, particularly for Malaysia and Indonesia which are located along key shipping lanes such as the Straits of Malacca and Sulawesi Sea (Marliani, 2024). These routes are important trade routes, but are also subject to piracy, smuggling, illegal fishing, and territorial disputes (Guan, 2022). Given their geographical proximity and common security interests, Lubis (2022) agrees that defence diplomacy also plays an essential role in countering these threats through joint naval drills, intelligence sharing, and multilateral cooperation under the auspices of ASEAN.

The ASEAN platform enables regional security cooperation, especially through the ASEAN Regional Forum (ARF) and ASEAN Defence Ministers' Meeting (ADMM-Plus) process (Kaewkamol & Klaisringoen, 2019). However, challenges remain in the naval asset modernisation, efficiency of information-sharing, and maritime security policy alignment.

This study explores the role of naval diplomacy in strengthening both the bilateral and ASEAN security relations, as well as examining the defence implications of joint maritime exercises and intelligence sharing for regional security.

PROBLEM STATEMENT

Maritime security in Southeast Asia has become an escalating cause of concern, as its waters constitute nearly 24% of the global trade (Fathun, 2019). Furthermore, the region is under the harshness of piracy, smuggling, illegal fishing, and territorial disputes exacerbated by geopolitical tensions in the South China Sea (Khanisa & Farhana, 2022). As key maritime states, the importance of defence diplomacy and naval cooperation to corrall such challenges and preserving regional stability would not elude Malaysia and Indonesia.

Despite several bilateral agreements, coordinated patrols and joint naval exercises, there are significant gaps in the Malaysia-Indonesia maritime security cooperation. Intelligence-sharing mechanisms remain inconsistent, hindering situational awareness and responsiveness. There is an operational inequity due to a technological inequivalent in both naval assets and their communications systems. Across the globe, cybersecurity vulnerabilities put security operations at risk. While ASEAN facilitates regional collaboration, the lack of standardised policies and national interest prioritisation hinders a fully integrated defence strategy.

Therefore, this study aims to examine the effectiveness of the Malaysia-Indonesia defence diplomacy in addressing maritime threats. It seeks to identify gaps in intelligence sharing, operational coordination, and regional defence integration while providing policy recommendations to strengthen the maritime security cooperation between the two nations.

RESEARCH QUESTIONS

This study seeks to answer the following:

1. What is the current state of the Malaysia-Indonesia maritime security cooperation?
2. How effective are joint naval exercises and intelligence-sharing efforts in addressing the maritime threats?
3. What role does the naval diplomacy play in strengthening the bilateral and ASEAN defence relations?
4. What improvements can be made to enhance the maritime security cooperation?

FINDINGS

Malaysia and Indonesia maintain robust defence cooperation through bilateral agreements, coordinated patrols, and intelligence-sharing mechanisms to secure their shared waters, particularly in the Straits of Malacca and Sulawesi Sea. These regions are vital for international trade and regional stability. The 1969 Treaty of Jakarta serves as the legal foundation for maritime collaboration, while operational frameworks like Malacca Strait Patrols (MSP) and MALINDO Patrols help reduce piracy and ensure safer shipping lanes

Interoperability, Cooperation, Operational Readiness, and Humanitarian Response through the Joint Naval Exercise such as MALINDO JAYA and KOMODO Exercise have improved. These exercises improve coordination in responding to security threats, conducting search and rescue missions, and enforcing maritime law. However, barriers like resource constraints, communication silos, and cybersecurity risks hinder the ability to maximise these efforts.

The strengthening of military cooperation has enhanced maritime battle preparedness, confidence-building, and regional strategic combination between the two nations, particularly in border policies in the event of a conflict. The joint exercises aim to help develop operational synergy and enhance the capability of countering piracy and smuggling and management of other maritime threats. Enhanced situational awareness through real-time sharing of intelligence helped to counter maritime crime in the Malacca Strait and Sulawesi Sea, securing safer trading pathways.

These successes notwithstanding, incompatibilities between communication systems lead to delayed responses, while cybersecurity vulnerabilities threaten leaks of intelligence. Poor information-sharing infrastructure degrades maritime domain awareness. Standardised processes through the MALINDO JAYA have facilitated inter-agency coordination to some extent, but the measures still need to ensure better protection of sensitive intelligence.

The Naval diplomacy is also important in enhancing bilateral defence relations and promoting the ASEAN-wide security integration. Constant interaction and policy coordination help ease the maritime tensions, making sure disagreements are resolved

through dialogue, not conflict. The cooperation encourages the ASEAN framework on defence, especially ADMM Plus, and promotes the interests of defence in the region.

The joint naval training and military exercises also improve crisis response mechanisms, making both navies better prepared to meet emerging threats like piracy, illegal fishing, and human trafficking. That said, the overarching challenge remains how to balance national interests with regional security goals, particularly in the face of military capability disparities. These issues need to be overcome for a more cohesive framework of the regional security.

The joint patrols with Singapore and the Philippines should also be expanded to address transnational crime in maritime spaces such as piracy and smuggling. Real-time threat detection and situational awareness can achieve more effective outcomes if intelligence-sharing platforms are integrated, for example, the Singapore's Information Fusion Centre (IFC).

Such frameworks of the ASEAN maritime security agreements can provide a more codified and therefore systematic way of regional cooperation with regards to contentious maritime issues such as territorial disputes and anti-piracy operations. Communication systems must be improved to reduce the time between intelligence detection and sharing, and multilateral joint exercises should be increased to improve regional interoperability.

Beyond the provision of security, the naval diplomacy can be used for humanitarian assistance and disaster relief (HADR) missions, strengthening countries in disaster response and medical assistance. This will result in strengthening the legal frameworks to stimulate the ASEAN members' formal obedience towards UNCLOS (United Nations Convention on the Law of the Sea) and international maritime law, as well as the use of the ASEAN mediation committees to resolve maritime disputes peacefully.

CONCLUSION

Particularly, the Malaysia-Indonesia maritime security cooperation has effectively combatted piracy, along with improving intelligence-sharing and naval interoperability. But technical challenges, cybersecurity threats, and policy misalignments persist. Adopting measures such as strengthening joint patrols, intelligence-sharing, and ASEAN-led defence diplomacy is key for sustainable security in the region.

With the incorporation of this article and the need to improve further, Malaysia and Indonesia will be in a key position of collective defence diplomacy that will ensure a cohesive, resilient maritime Southeast Asia system. With concerted cooperation, technology transfer, and political diplomacy, both countries can become a model for maritime security governance within ASEAN.

ACKNOWLEDGEMENT

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Revisiting the Finance-Growth Nexus in Developing Countries: Spatial Evidence on the Governance Spillovers

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ABSTRACT

While prior research has widely examined how financial development (FD) influences economic growth, the role of cross-country spatial interdependence in this regard remains underexplored. This study contributes to bridge this gap by employing a spatial econometric technique to analyse 56 developing economies from 1990-2019. Key results indicate that while FD stimulates growth, there is no conclusive evidence of its threshold effect. Governance factors are crucial in the nexus of FD-growth, with political governance demonstrating robust direct and spillover effects on growth. Economic governance, on the other hand, appears to moderate the growth-effect of FD. Overall, these findings underscore the importance of spatial interdependence and governance quality in the FD-growth nexus. The study implies the need for coordinated policy-making that strengthens financial systems alongside governance reforms, particularly political stability and regulatory frameworks, to maximise growth. By integrating spatial spillovers and governance dynamics into policy design, developing economies can better harness financial development for sustainable and inclusive economic progress.

Keywords: Economic growth, financial development, governance quality, spatial Durbin model, spillover effect

INTRODUCTION

The relationship between financial development (FD) and economic growth is widely studied, with a general consensus on its positive link (Dawson, 2010; Demetriades & Rousseau, 2016). Governance plays a key role in enhancing the FD's growth effects, with strong legal protections, economic freedom, and corruption control supporting

FD (Law et al., 2013). However, excessive FD in weak institutional contexts can hinder growth, as seen in the "finance curse" phenomenon. Law et al. (2018) found an inverted U-shaped relationship, where excessive finance stifles growth in poorly governed systems. Effective governance mitigates financial corruption and ensures productive resource use, enhancing the FD's positive impact on growth. Post-2008 crisis studies argue that without strong governance, excessive finance can limit growth (Cecchetti & Kharroubi, 2012; Law & Singh, 2014).

While early research showed a positive correlation, recent studies focus on causality and institutional mechanisms, revealing bidirectional links, especially through the banking sector. However, empirical findings are inconclusive due to methodological and contextual differences (Bijlsma et al., 2018; Qasemi, 2019). Globalisation has complicated this relationship by increasing interdependence, emphasising the need to consider spatial spillovers, an area this study aims to explore.

Recent spatial econometric studies, primarily focussing on China and the Asia-Pacific region, have examined the FD's impacts on the economic and environmental outcomes (Wang et al, 2019; Zhong & Li, 2020). Some studies, employing spatial autoregressive and spatial Durbin models, reveal that the FD enhances growth and inclusiveness but may also impose environmental pressures without improved governance (Al-Barakani et al., 2022; Ran et al., 2020; Samreen & Majeed, 2020). However, studies on multi-country spatial spillovers of governance in the finance-growth nexus are apparently limited (Ahmad & Law, 2023).

This study, using the spatial Durbin model (SDM) examines the role of spatial spillovers in the FD, governance, and growth nexus across 56 developing countries from 1990 to 2019 and it addresses two key questions: (1) does the FD in one country cause spillovers into neighbouring countries? And (2) does governance still matter in the FD-growth relationship when spatial effects are considered? The study focusses on emerging and developing countries to minimise sample heterogeneity and employs geographical matrices to objectively interpret spatial dependence.

The study contributes to the literature by: (1) demonstrating the FD's spillover effects on neighbouring countries' growth; (2) reinforcing the significance of governance quality in growth; and (3) examining the governance's moderating role in the FD-growth link. Findings confirm the FD's positive impact on growth, with political governance (PG) being the most influential driver, while the economic governance (EG) moderates the FD's growth effects. These insights offer valuable policy implications for emerging economies.

MATERIALS AND METHODS

The following is a growth model with right-hand-side regressors comprising the FD, governance, and other control variables:

$$GROWTH_{it} = \alpha_i + \beta_1 FD_{it} + \beta_2 FD_{it}^2 + \beta_3 EG_{it} + \beta_4 PG_{it} + \beta_5 (EG * FD)_{it}$$
$$+ \beta_6 (PG * FD)_{it} + X'\beta + \varepsilon_{it} \qquad [1]$$

where GROWTH is the average growth rates of real GDP per capita in country, FD and FD^2 are financial development index and its squared term, EG and PG are economic and political governance terms, respectively. X is a vector of growth determinants such as initial real GDP per capita, investment, and population growth. α is the unobserved country-specific effects, and ε is the i.i.d. disturbance term.

Expanding the above equation into a SDM gives the following:

$$GROWTH_{it} = \alpha_i + \beta_1 FD_{it} + \beta_2 FD_{it}^2 + \beta_3 EG_{it} + \beta_4 PG_{it} + \beta_5 (EG * FD)_{it}$$
$$+ \beta_6 (PG * FD)_{it} + X'\beta + \rho W(GROWTH)_{it} + \theta_1 W(FD)_{it}$$
$$+ \theta_2 W(FD^2)_{it} + \theta_3 W(EG)_{it} + \theta_4 W(PG)_{it} + \theta_5 W(EG * FD)_{it}$$
$$+ \theta_6 W(PG * FD)_{it} + W(X')\theta + v_{it} \qquad [2]$$

where the spatial weight matrix, W, captures spatial dependence between countries using binary contiguity at the first order. Here, countries are neighbors if they share borders, with $w_{ij} = 1$ for contiguous countries and 0 otherwise. This contiguity matrix is strictly exogenous, avoiding identification issues (Anselin & Bera, 1998; Manski, 1993). Following spatial econometric conventions, the matrix is row-standardised.

The 56 developing countries were selected based on having at least one neighbour for spatial matrix construction and no missing data. Variables, collected annually, are converted into 5-year averages, resulting in six non-overlapping periods and 336 observations. Governance quality is proxied by Law and Order (EG) from the ICRG dataset (The PRS Group, 2017) and Polity 2 (PG) from the Polity V dataset (Marshall & Gurr, 2020). Financial Development (FD) is measured using the IMF's Financial Development Index (International Monetary Fund, 2019), while real GDP per capita growth, investment, and population growth are sourced from the World Development Indicators (World Bank Group, 2020).

RESULTS AND DISCUSSION

As seen in Equation 2, SDM estimation captures the within-country effects (β coefficients) and the spillover effects from neighboring countries (θ coefficients). The results in Table 1 show the FD's significant positive impact on growth at the 5% level, but the negative FD² coefficient, suggesting an inverse U-shaped relationship, is statistically insignificant, indicating no threshold effect. The PG, measured by Polity 2, significantly drives growth, while the EG, measured by Law and Order, is insignificant. However, the negative

significant interaction term FD*EG reveals that the FD's growth effect diminishes as the EG improves, suggesting policymakers should consider the EG levels in financial development strategies. The results also confirm conditional convergence, with investment and population growth significantly influencing growth dynamics.

Meanwhile, the spillover effects, captured by ρ (spatially lagged growth) show positive growth spillovers (significant at 1%). Significant θ coefficients (for spatially lagged

Table 1
Estimation results

Estimation model	Spatial Durbin Model (SDM)	
	Within-country effect^	Spillover effect^
FD	16.251**	-3.279
	(7.676)	(9.093)
FD²	-7.643	18.610**
	(7.326)	(8.807)
EG (Law and Order)	0.518	0.844*
	(0.330)	(0.453)
PG (Polity 2)	0.143**	0.040
	(0.060)	(0.071)
FD*EG	-2.374**	-2.179
	(1.151)	(1.417)
FD*PG	-0.080	-0.196
	(0.206)	(0.251)
Initial real GDP per capita	-4.583***	1.923**
	(0.701)	(0.767)
Investment	0.163***	0.001
	(0.026)	(0.035)
Population growth	-0.437**	-0.464
	(0.214)	(0.343)
ρ		0.135***
		(0.051)
Country-fixed effects	Yes	
Time-fixed effects	Yes	
Number of countries	56	
Number of observations	336	
R-squared (adjusted)	0.124	
Residual variance	2.669***	
LLF	-643.211	
AIC	1326.423	

^In SDM estimation, within-country effect is given by the *β* coefficients, and spillover effect is by the *θ* coefficients (i.e., the neighbors' effect) – see Equation (2)
Note. The dependent variable is Real GDP per capita growth rate. Standard errors in parentheses. ***, ** and * indicate a significant level at 1%, 5% and 10% respectively

explanatory variables) for neighbours' FD² and EG indicate positive externalities, with FD² suggesting a U-shaped threshold effect and potential club convergence in financial development. Spatially lagged initial GDP per capita also supports growth convergence clubs, though the positive coefficient may imply divergent long-term paths (Ahmad & Hall, 2017; Arbia et al., 2010).

CONCLUSION

This study, using the spatial Durbin analysis on a 30-year panel of 56 emerging countries, confirms the financial development's (FD) significant positive impact on growth but finds no evidence of an inverted U-shaped threshold effect. Governance, especially the Political Governance, is critical for driving growth domestically and through spillovers, while the Economic Governance moderates the FD's growth effects. These findings underscore the importance of balancing the FD promotion with strong institutional frameworks, emphasising transparency, accountability, and the rule of law. Regional cooperation is also vital to harness cross-border spillovers and ensure policy stability.

In conclusion, the study highlights the nuanced interplay between the FD, governance, and growth, offering policymakers insights to design targeted, balanced strategies for sustained and inclusive economic development in emerging economies.

ACKNOWLEDGEMENTS

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Key Determinants of Profitability in Malaysia's Top 100 Shariah-Compliant Firms

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ABSTRACT

The study examines the determinants of profitability for 44 of the top 100 Shariah-compliant firms listed on the Bursa Malaysia. Using the panel data regression, it analyses the relationship between profitability (measured by gross margin) and five factors: liquidity (quick ratio), leverage (assets to equity), efficiency (inventory turnover), earning power (earnings retention), and corporate governance (highest remuneration and board compensation). The Random Effects Generalised Least Squares (GLS) regression with robust options revealed key insights. Efficiency, measured by inventory turnover, positively impacts profitability ($p < 0.05$), highlighting the benefits of effective inventory management. Notably, corporate governance, specifically the highest remuneration package, negatively correlates with profitability, suggesting that Shariah principles emphasising fair compensation play a role. However, the study has limitations. The small sample size affects generalisability, a limited selection of financial ratios results in lower adjusted R-squared values, and reliance on historical data (1993–2023) may not fully reflect current market testability.

Keywords: Corporate governance, ESG factors, Islamic finance, profitability, shariah-compliant firms

INTRODUCTION

Profitability is a key indicator of a firm's success, reflecting its efficiency and growth potential. For Shariah-compliant firms, achieving profitability is more complex due to adherence to Islamic principles, which prohibit interest (riba), uncertainty (gharar), and gambling (maysir) while promoting ethical investment. Beyond financial stability, the profitability also

enhances market valuation and attracts investors who prioritise Shariah-compliant business models (Abdullah & Shen, 2017). Unlike conventional firms, Shariah-compliant businesses operate under strict financial guidelines, presenting unique challenges. This study examines 44 of the top 100 Shariah-compliant firms listed on the Bursa Malaysia, using data from the Refinitiv Eikon, to identify key profitability drivers (Hussain et al., 2015). Previous studies (e.g., Halim et al., 2015) have highlighted factors such as firm size, leverage, liquidity, and operational efficiency. However, the impact of corporate governance particularly executive remuneration remains underexplored. This study addresses that gap by analysing the link between corporate governance and profitability in Shariah-compliant firms. The findings offer insights for investors, policymakers, and corporate leaders looking to optimise governance structures for long-term sustainability. A key contribution of this research is its focus on executive remuneration, specifically the highest compensation packages, as a determinant of profitability. By examining corporate governance from a Shariah-compliant perspective, this study provides new insights within the Malaysian context. The paper is structured as follows: first, it explores key determinants of profitability among Shariah-compliant firms in the Bursa Malaysia and outlines the methodology for data collection and analysis. The results section presents key findings, including regression outcomes and hypothesis testing. Finally, the paper discusses study limitations, practical recommendations, and future research directions.

DETERMINANTS OF CAPITAL STRUCTURE

Profitability is essential for a company's financial health. For Shariah-compliant firms in Bursa Malaysia's top 100, managing key factors like liquidity, leverage, efficiency, earnings power, and corporate governance is crucial. Liquidity ensures stability but holding too much cash can limit growth (Johnson, 2020). Leverage helps fund expansion but excessive debt raises financial risks (Ahmed & Tan, 2021; Brown, 2018). Efficiency boosts profit margins, though extreme cost-cutting can harm sales (Jones & Gray, 2019; Singh, 2022). Earnings power supports growth, but retaining too much profit may frustrate investors (Abdullah & Lee, 2020; Chen, 2021). Good corporate governance enhances financial performance, while excessive executive pay can weaken profitability (Khan & Rahim, 2021; Lee & Patel, 2019; Miller, 2020). Balancing these factors helps Shariah-compliant firms stay competitive while meeting ethical and financial constraints.

METHODOLOGY

This study examines the factors influencing profitability in Shariah-compliant firms using panel data analysis. A quantitative approach is used to analyse how liquidity, efficiency, leverage, earnings power, and corporate governance impact profitability. The focus is on the top 100 Shariah-compliant firms listed on the Bursa Malaysia, but financial institutions,

banks, and insurance firms are excluded due to their unique financial structures and regulations (Chen, 2004). After filtering, 44 firms remain in the final sample. The data analysis follows three main steps. First, model selection is conducted using tests like the F-test, Breusch-Pagan Lagrange Multiplier (BP-LM), and Hausman test (Park, 2011). Second, diagnostic tests check for issues such as multicollinearity, heteroscedasticity, and serial correlation. Lastly, any identified issues are corrected following Hoechle's (2007) recommendations. This structured approach ensures accurate analysis of profitability factors in Shariah-compliant firms.

FINDINGS AND DISCUSSION

The model is statistically significant. However, the overall model fit is modest ($R^2 = 0.0537$), which aligns with prior research indicating that while some factors impact profitability, their combined effect may be limited (Gujarati, 2015). Liquidity has a negative but statistically insignificant impact on gross margin. This suggests that while liquidity ensures operational stability, it does not necessarily enhance profitability in this context (Rocca, 2017). Similarly, leverage also shows a negative but insignificant effect, supporting the view that while debt can offer tax benefits, excessive reliance may reduce financial flexibility and profitability. Efficiency, however, has a significant positive effect, reinforcing that better resource management improves cost control and profit margins. Earnings power shows a positive relationship with profitability, though it is statistically insignificant, indicating that further analysis may be needed to clarify its impact. Corporate governance, measured through remuneration, has a highly significant negative effect, suggesting that excessive executive compensation may erode profitability.

CONCLUSION

This study examines how liquidity, leverage, efficiency, earnings power, and corporate governance affect profitability, measured by gross margin. The results show that efficiency improves profitability, while high remuneration costs reduce it. This highlights the importance of cost control and operational efficiency in financial performance. However, the study has limitations. Gross margin alone may not fully reflect profitability, and other unexamined factors could influence results. The focus on specific firms and industries also limits generalisability, and external factors like market conditions were not considered. Future research should include broader profitability measures, diverse industries, and macroeconomic factors for a more complete analysis. Examining competition, firm size, and long-term trends could also provide deeper insights into profitability drivers.

ACKNOWLEDGEMENT

Authors Arina Amirah Abdul Rahim, Wan Mohd Yaseer Mohd Abdoh, Abdul Hafiz Yusof, Muhammad Faris Amer Runnizar, Nur Iwani Izzati Azmi, Akid Ayisy Mohd Asri, Nur Aliff Farhan Muhammad Nor, Nor Arni Nazira Othman and Norhisam Bulot

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Vol. 1 (4) 2025

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Pertanika Proceedings
Vol. 1 (4) 2025

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