

Determinants of Digital Advertising Adoption among SMEs in Malaysia

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Abstract

Purpose: This study aims to examine the determinants influencing small and medium-sized enterprises' (SMEs) intention to adopt digital advertising in Malaysia, using the Theory of Planned Behaviour (TPB) as the theoretical framework. Specifically, it examines the impact of economic benefits, perceived usefulness, brand awareness, and return on investment (ROI) on adoption intention.

Design/methodology/approach: A quantitative research design was utilized, employing a cross-sectional survey disseminated online to a purposive sample of 496 small and medium-sized enterprise owners and managers throughout Malaysia. The data were examined utilizing SPSS, incorporating descriptive statistics, reliability analysis, Pearson's correlation, and multiple regression to evaluate the offered hypotheses.

Findings: The result shows that all four variables positively impact SMEs' intention to adopt digital advertising. Economic benefit and return on investment (ROI) emerged as the most significant factors, demonstrating that financial considerations predominantly influence the adoption of digital advertising, although perceived usefulness and brand awareness also play substantial roles.

Research limitations/implications: The study's cross-sectional design restricts causal inference, and the findings are exclusively derived from Malaysian SMEs, which may diminish generalizability. The adoption patterns and cultural differences that are evolving could be captured through longitudinal and comparative cross-country research in the future.

Practical implications: The findings give useful information to owners of small and medium-sized businesses and digital platform providers.

Originality/value: This study extends the theory of Planned Behaviour by integrating Return on Investment (ROI) and brand awareness into the framework, offering empirical evidence from the context of an emerging economy. It contributes to the limited body of research on SME digital advertising adoption in Southeast Asia for enhancing SME digital transformation strategies.

Keywords: Digital Advertising, SMEs, Economic Benefit, Brand Awareness, Perceived Usefulness, Return on Investment, Malaysia

Introduction

The global digital transformation represents a paradigm shift that has fundamentally restructured how enterprises engage with markets, customers, and competition. Within this evolving milieu, digital advertising has ascended to become a strategic imperative, indispensable for enhancing organisational competitiveness, achieving widespread brand visibility, and fostering deep customer engagement (Statista, 2023). Its widespread adoption reflects a conscious organisational decision to leverage data-driven mechanisms for reaching fragmented, contemporary consumer bases. In the context of Malaysia, the ecosystem is notably conducive to the extensive strategic utilisation of digital channels by the Small and Medium-sized Enterprises (SMEs) sector. This enabling environment is underscored by a high national internet penetration rate, recorded at an estimated 97.4% in 2022 (Malaysian Communications and Multimedia Commission, 2023). The SME sector itself is a fundamental pillar of the national economy, contributing over 97% of all business establishments and providing employment to nearly half of the nation's workforce (SME Corp Malaysia, 2022). Consequently, the capacity of these firms to successfully integrate and optimise digital marketing innovations critically determines Malaysia's economic resilience, especially in the volatile post-pandemic recovery period.

Despite the compelling advantages of digital advertising—notably its cost efficiency, micro-targeting capabilities, and performance measurability (Agrawal et al., 2019)—many SMEs continue to encounter substantial challenges rooted in resource constraints, a discernible lack of specialized internal expertise, and the operational complexity of managing diverse digital platforms (Cheah et al., 2022; Liew et al., 2021). Consequently, a gap remains in the literature regarding the empirical quantification of the precise factors that drive SMEs' adoption intention within the unique Malaysian emerging economy context. While established theoretical constructs like perceived usefulness (Davis, 1989) are recognized, the complex interplay and differential significance of strategic, financial, and promotional variables, such as Return on Investment (ROI) and brand awareness, necessitate a dedicated, rigorous investigation.

This research examines the factors influencing the intention of SMEs in Malaysia to adopt digital advertising, utilizing the Theory of Planned Behavior (TPB) as the framework. By employing an extended version of the Theory of Planned Behaviour (TPB), the research provides a systematic examination of how economic benefit, perceived usefulness, brand awareness, and ROI collaboratively and individually drive the strategic adoption intention of Malaysian SMEs. The expected findings seek to offer dual contributions: first, to enrich the academic literature on technology adoption within emerging markets; and second, to provide concrete, actionable guidance for policymakers and business leaders aiming to fortify SMEs' competitive stance in the contemporary digital marketplace.

Literature Review

The Theory of Planned Behaviour (TPB) (Ajzen, 1991) provides the foundational theoretical architecture for this study, positing that human action is primarily guided by intention, which is a function of three core psychological antecedents: attitude toward the behaviour, subjective norms, and perceived behavioural control. This framework is highly suitable for examining discretionary business decisions, such as technology adoption, by translating general attitudes into specific behavioural intentions. This research extends the model by embedding four specific, context-relevant constructs derived from digital marketing literature that directly influence these psychological antecedents.

Economic Benefit

Economic benefit refers to the direct and indirect financial gains that digital advertising provides to small and medium-sized businesses (Qi, 2002). Measurable gains in sales, cost savings, and increased market share are essential for SMEs with limited funding to support their advertising expenditures (Febriandika et al., 2023). According to empirical data, SMEs that use digital advertising frequently outperform those that rely on traditional media channels in terms of market reach and client acquisition expenses (Agrawal et al., 2019). While maintaining high conversion rates, targeted social media advertising can save marketing costs (Duan et al., 2022). However, the long-term viability of these financial advantages for SMEs may be jeopardized by the erratic nature of online competition, variations in advertising expenses, and changing platform algorithms. Therefore, the hypothesis for this study is:

H1: Economic benefit positively influences SMEs' intention to adopt digital advertising.

Perceived Usefulness

Perceived usefulness refers to the belief that digital advertising enhances efficiency and marketing performance. Nouran and Taher (2021) found that AI tools can improve customer insights, personalization, and campaign evaluation of the companies. Moreover, user perception, such as Facebook pixels, has shown that it affects campaign outcomes. Prior research indicates that SMEs using digital advertising gain broader market coverage and reduce customer acquisition costs (Agrawal et al., 2019). Therefore, the hypothesis for this study is:

H2: Perceived usefulness positively influences SMEs' intention to adopt digital advertising.

Brand Awareness

Brand awareness refers to the degree to which customers are aware of and recall a brand (Wang et al., 2014). Digital advertising enhances brand awareness through regular exposure, interactive content, and tailored campaigns across several platforms (Riaño et al., 2022). According to Makrides et al. (2020), greater visibility for SMEs can boost client loyalty and trust, two factors that are essential for sustained competitiveness. Strategies such as influencer partnerships, social media storytelling, and native advertising further enhance brand recognition (Wilcox, 2021). However, maintaining consistent brand messaging across multiple media requires ongoing financial investment, which may present challenges for SMEs. Therefore, the hypothesis for this study is:

H3: Brand awareness has a positive influence on SMEs' intention to adopt digital advertising.

Return on Investment (ROI)

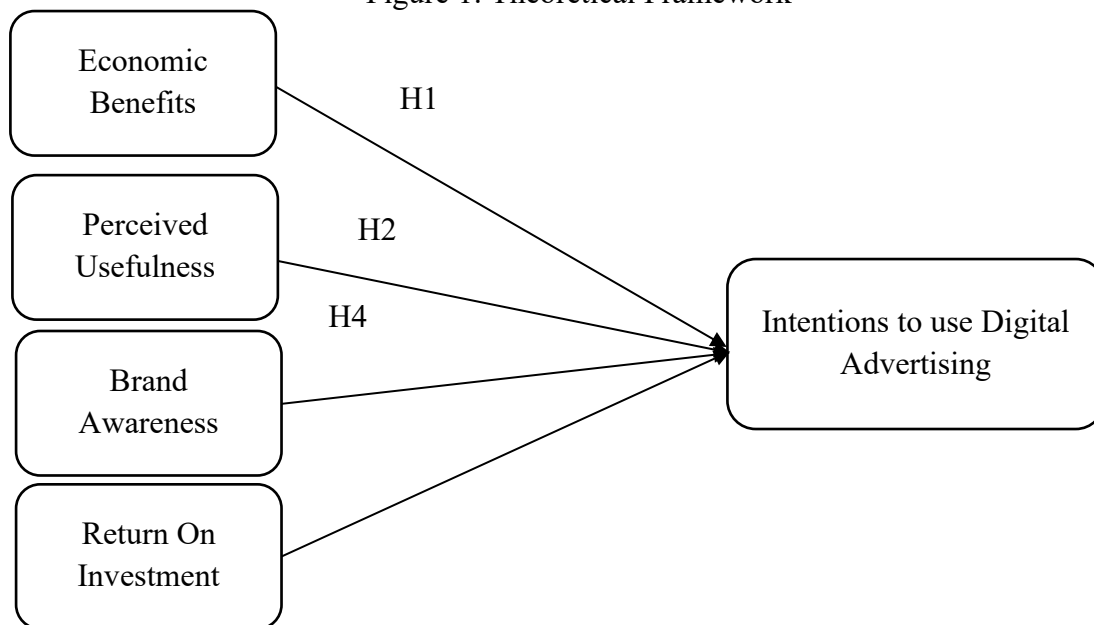
When comparing marketing gains to related expenses, return on investment (ROI) is a crucial indicator (Brousselle et al., 2016). For SMEs, proving a return on investment is crucial to defending ongoing expenditures in digital advertising. According to research, ROI can be raised through data optimization, retargeting, and accurate targeting (Shreya, 2017; Agrawal et al., 2019). Rank amplification, or increased prominence of search results, can also increase returns (Dover & Neslin, 2015). However, because of fragmented analytics and a lack of marketing skills, many SMEs struggle to accurately evaluate ROI. Therefore, the hypothesis for this study is:

H4: Return on investment (ROI) positively influences SMEs' intention to adopt digital advertising.

Theoretical Framework and Hypothesis Development

This study proposes that perceptions of financial benefit, operational usefulness, brand enhancement, and quantifiable returns shape small and medium-sized enterprises' (SMEs) intention to adopt digital advertising. It does this by integrating the Theory of Planned Behavior (TPB) with important constructs from the literature on digital marketing adoption. The suggested model encompasses both the broad behavioral drivers and the considerations of SMEs operating in emerging markets by fusing the attitudinal, normative, and control components of TPB with context-specific elements pertinent to digital advertising. This integration provides a more comprehensive framework for understanding and forecasting SMEs' adoption intentions in the digital economy.

Figure 1: Theoretical Framework



Hypotheses

- **H1:** Economic benefit positively influences SMEs' intention to adopt digital advertising.
- **H2:** Perceived usefulness positively influences SMEs' intention to adopt digital advertising.
- **H3:** Brand awareness positively influences SMEs' intention to adopt digital advertising.
- **H4:** ROI positively influences SMEs' intention to adopt digital advertising.

Method

Research Design

This research utilized a quantitative design to investigate the factors influencing SMEs' intention to adopt digital advertising in Malaysia. Utilizing the Theory of Planned Behaviour (TPB), the study examined the correlations between four independent variables economic advantage, perceived usefulness, brand recognition, and return on investment (ROI) and the dependent variable, the intention of SMEs to adopt. A cross-sectional survey method was selected to gather standardized data from a substantial sample within a defined timeframe, facilitating the statistical analysis of proposed associations (Creswell, 2014).

Sampling and Data Collection

The target population consisted of Malaysian SME owners and managers aged 18 and older, representing diverse income levels and sectors. Purposive sampling was precisely implemented to ensure all respondents were owners or top-level managers of Malaysian SMEs with relevant prior awareness or experience with digital advertising. A self-administered online questionnaire was disseminated through Google Forms, utilizing social media sites for outreach. From the gathered replies, 496 valid cases were selected for analysis, surpassing the advised minimum of 300 for multiple regression analysis in behavioral research (Hair et al., 2019).

Measurement Instrument and Data Analysis

All measurement items for the constructs were adapted from well-validated, established scales in the extant literature and measured on a five-point Likert scale. Data analysis was executed using SPSS. Initial reliability analysis confirmed the excellent internal consistency of all constructs, with Cronbach's alpha values consistently exceeding the threshold (Tavakol & Dennick, 2011). Pearson's correlation analysis confirmed the absence of problematic multicollinearity among the predictors. Finally, multiple regression analysis was the primary technique employed to ascertain the differential predictive efficacy of the four independent variables on the dependent variable (intention), with the level of statistical significance for all tests set at $\alpha=0.05$.

Ethical Considerations

Ethical adherence was upheld throughout the research process. Participation was wholly voluntary, and all respondents granted informed consent before completing the questionnaire. The study's aims were explicitly conveyed to participants, who were guaranteed the confidentiality and anonymity of their comments. No personal identities were gathered, and the data were utilized exclusively for academic purposes in compliance with ethical standards for social science research.

Findings and Discussions

A multiple regression analysis was executed to determine the collective and individual influence of the four variables on SMEs' intention to adopt digital advertising. The results are comprehensively summarized in Table 1.

Table 1: Multiple Regression Results for SMEs' Intention to Adopt Digital Advertising

Predictor Variable	B	Std. Error	Beta (β)	t	Sig. (p)
Constant	-0.763	0.156	–	-2.163	0.021
Economic Benefit	0.251	0.064	0.124	3.127	0.003
Perceived Usefulness	0.052	0.082	0.040	0.764	0.042
Brand Awareness	0.064	0.087	0.071	0.935	0.026
Return on Investment	0.427	0.078	0.035	2.904	0.004

Model Summary: $R^2 = 0.823$, Adjusted $R^2 = 0.821$, $F(4, 491) = 189.345$, $p < 0.05$

The overall model achieved a high degree of statistical significance ($p < 0.05$) and demonstrated exceptional explanatory power, accounting for 82.3% ($R^2 = 0.823$) of the total variance in adoption intention. Critically, all four predictor variables were found to be statistically significant at the 5% level, leading to the unequivocal confirmation of all proposed hypotheses (H1–H4).

Discussion of Findings

The finding that Economic Benefit had the largest standardized coefficient ($\beta = 0.124$, $p = 0.003$) confirms that the decision by Malaysian SMEs is fundamentally driven by the expectation of tangible financial gains, validating the core rationale for their adoption (Febriandika et al., 2023). This result strongly supports the dominance of the attitude toward the behaviour construct within the TPB. Similarly, Return on Investment (ROI) was found to be a highly significant determinant ($\beta = 0.035$, $p = 0.004$). Its substantial significance (second only to Economic Benefit in strength) reinforces that a management team's sense of control over performance outcomes is a central determinant. The ability to track metrics and demonstrate a positive ROI directly aligns with and validates the perceived behavioural control construct of the TPB (Shreya, 2017). Perceived usefulness also demonstrated a significant positive effect ($\beta = 0.040$, $p = 0.042$), aligning with the Technology Acceptance Model (TAM) (Davis, 1989). This confirms that SMEs value the operational advantages, such as precise targeting and enhanced efficiency, as necessary precursors that strengthen their conviction in the tool's efficacy (Rehman et al., 2023). Finally, Brand awareness was found to be a significant determinant ($\beta = 0.071$, $p = 0.026$), underscoring the strategic importance of market presence for small firms and reflecting the influence of subjective norms where online visibility is viewed as a necessary indicator of credibility and success (Makrides et al., 2020).

Conclusion and Recommendations

This research successfully identified and quantified the critical determinants influencing the strategic adoption intention of digital advertising among Malaysian SMEs. The findings unequivocally underscore that economic motivation and performance measurability (ROI) are the dominant drivers of digital adoption within this sector. The study confirms that decisions are made through a lens of pragmatic financial accountability, which aligns with the reality of resource-constrained enterprises in a competitive environment. The research significantly extends the TPB framework by formally integrating the performance-centric constructs of ROI and brand awareness, thus offering a more holistic and current perspective relevant to the digital marketing domain and providing robust evidence from the Southeast Asian emerging market context.

Theoretical Contributions

The study enhances the TPB framework by incorporating aspects frequently examined in digital marketing: economic benefit, perceived utility, brand awareness, and ROI into a cohesive model for SME adoption behavior. This study experimentally validates these linkages within the Malaysian context, thereby contributing to the sparse literature on digital advertising adoption in Southeast Asia. Moreover, the study highlights the importance of integrating the Theory of Planned Behavior with performance-oriented measures such as ROI to better capture the multifaceted nature of marketing decision-making.

Practical Implications

The results provide valuable and actionable insights for key stakeholders. Policymakers should shift their focus from merely promoting adoption to developing and funding training programs

that teach SMEs how to measure and interpret sophisticated ROI and analytics. Digital platform providers must concentrate on enhancing the user-friendliness of their analytics dashboards and simplifying the connection between advertising expenditure and tangible sales conversion data. SME management must prioritize data literacy and allocate resources for the necessary tools and expertise required to track and demonstrate positive ROI over time.

Limitations and Future Research

The findings of this study are subject to two principal limitations. First, the cross-sectional design restricts the ability to infer long-term causal relationships. Second, the exclusive focus on Malaysian SMEs limits the immediate generalizability of the results to other cultural and economic contexts. Future research is strongly recommended to pursue the following avenues: implementing a longitudinal design to track the evolution of adoption intention over several years; employing qualitative methodologies (e.g., in-depth interviews) to provide richer contextual insights into managerial risk assessment processes; and conducting a cross-country comparative study across ASEAN nations to test the model's generalizability and reveal unique cultural or regulatory influences.

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