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Strategic It Management Practices and Business Sustainability among Smes in Selected Business Sectors in Malaysia

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Abstract: Small and Medium Enterprises (SMEs) increasingly depend on information technology (IT) to sustain operations, respond to market change and create long-term organisational value. However, technology adoption alone does not ensure sustainable outcomes. This study examines the influence of Strategic IT Planning, IT Governance and IT Capability on Business Sustainability among SMEs in selected business sectors in Malaysia and determines their relative contribution. Grounded in the Resource-Based View (RBV), the study conceptualises strategic IT practices as organisational capabilities through which technology resources can be planned, governed and utilised. A positivist, deductive and quantitative cross-sectional design was employed. Data were collected using a structured five-point Likert questionnaire from SME owners, chief executive officers, senior managers and executives involved in strategic or IT-related decision-making. Of 320 questionnaires distributed, 307 were returned and 300 valid responses were retained after screening. Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS 4 was employed with 5,000 bootstrap resamples. The structural model explained 70.9% of the variance in Business Sustainability ($R^2 = 0.709$), and predictive relevance was supported ($Q^2 = 0.482$). Strategic IT Planning was positively associated with Business Sustainability ($\beta = 0.281$, $t = 4.521$, $p < .001$), as were IT Governance ($\beta = 0.312$, $t = 5.104$, $p < .001$) and IT Capability ($\beta = 0.426$, $t = 7.683$, $p < .001$). IT Capability also showed the largest relative effect ($f^2 = 0.348$), followed by IT Governance ($f^2 = 0.176$) and Strategic IT Planning ($f^2 = 0.132$). The findings extend RBV by demonstrating that sustainable digital value is associated not only with technology resources but with the organisational capabilities required to align, govern, integrate and utilise those resources. The study contributes empirical evidence from Malaysian SMEs and provides practical implications for managers and SME support agencies.

Keywords: Strategic IT Planning; IT Governance; IT Capability; Business Sustainability; Resource-Based View; SMEs; Malaysia.

I. Introduction

Digital technologies have changed how organisations create value, coordinate operations and respond to competitive pressure. Information technology is no longer confined to an operational support role; it has become part of organisational strategy, affecting efficiency, innovation, agility and the ability to respond to environmental change (Bharadwaj et al., 2013; Vial, 2019; Verhoef et al., 2021). For SMEs, this transition creates both

opportunity and difficulty. SMEs may adopt cloud services, enterprise applications, analytics, digital platforms and other technologies while simultaneously facing constraints in financial resources, specialist skills, governance structures and managerial attention.

Business Sustainability in this study refers to the capacity of an organisation to maintain long-term viability and value creation while adapting to changing market, technological and organisational conditions. The concept extends beyond short-term financial performance to include continuity, adaptability, resilience and sustained competitiveness (Bansal & DesJardine, 2014; Dyllick & Muff, 2016). This broader view is important for SMEs because resource constraints can make them more vulnerable to technological disruption, market uncertainty and changes in customer expectations.

A central issue is that technology ownership does not automatically translate into organisational value. Two organisations can possess similar technologies yet obtain different outcomes because they differ in strategic alignment, governance, employee skills, organisational routines and the ability to integrate technology into business processes. Research on digital transformation has therefore increasingly shifted attention from technology adoption towards organisational capabilities and transformation processes (Troise et al., 2022; Fang et al., 2024).

Within the strategic IT literature, Strategic IT Planning, IT Governance and IT Capability have often been examined as distinct topics. Strategic IT Planning addresses alignment between technology priorities and business direction; IT Governance establishes decision rights, accountability, control and risk management; and IT Capability concerns the organisational ability to deploy, integrate, learn and derive value from IT resources. The present study brings these three capabilities together in one empirical model and examines their direct relationships with Business Sustainability.

The Malaysian SME context provides a relevant setting for this investigation because SMEs operate under resource constraints while being encouraged to participate in digital transformation and sustainable growth. Although previous research has established links between digital capability, agility, innovation and firm performance, comparatively less empirical evidence directly tests the integrated influence of Strategic IT Planning, IT Governance and IT Capability on Business Sustainability among Malaysian SMEs. The study therefore addresses an integration gap, a contextual gap and an outcome gap.

1.1 Research Objectives and Questions

The study addresses four research objectives (ROs):

- RO1: To examine the influence of Strategic IT Planning on Business Sustainability among SMEs in Malaysia.
- RO2: To examine the influence of IT Governance on Business Sustainability among SMEs in Malaysia.
- RO3: To examine the influence of IT Capability on Business Sustainability among SMEs in Malaysia.
- RO4: To determine the relative contribution of Strategic IT Planning, IT Governance and IT Capability to Business Sustainability among SMEs in selected business sectors in Malaysia.

The corresponding research questions (RQs) are:

- RQ1: To what extent does Strategic IT Planning influence Business Sustainability among SMEs in selected business sectors in Malaysia?
- RQ2: To what extent does IT Governance influence Business Sustainability among SMEs in selected business sectors in Malaysia?
- RQ3: To what extent does IT Capability influence Business Sustainability among SMEs in selected business sectors in Malaysia?
- RQ4: Which of Strategic IT Planning, IT Governance and IT Capability makes the greatest relative contribution to Business Sustainability among SMEs in selected business sectors in Malaysia?

1.2 Research Gap and Contribution

The research gap is not the absence of research on digital technology and SMEs. Rather, it lies in the limited empirical integration of specific strategic IT management capabilities and the direct sustainability outcome. First, an integration gap exists because Strategic IT Planning, IT Governance and IT Capability are frequently studied separately. Second, a contextual gap remains because evidence directly focused on Malaysian SMEs is less extensive than evidence from large organisations or other national settings. Third, an outcome gap exists because many studies emphasise performance, innovation or competitiveness rather than Business Sustainability as the principal dependent construct. Fourth, a capability gap arises when technology possession or adoption is treated as equivalent to the organisational capability to realise value from technology.

The study contributes by integrating the three strategic IT capabilities within a single RBV-based empirical framework, testing their direct relationships with Business Sustainability and examining their relative contribution. The findings also identify the capability dimension that has the largest relative effect in the tested model, thereby providing a more differentiated understanding of strategic IT management among SMEs.

II. Literature Review and Hypotheses

2.1 Resource-Based View

The Resource-Based View (RBV) explains differences in organisational performance through the resources and capabilities controlled by firms and the ways those resources are deployed. Barney (1991) proposed that valuable, rare, imperfectly imitable and non-substitutable resources can underpin sustained competitive advantage. Later work refined the perspective by emphasising value creation and the organisational conditions through which resources are converted into outcomes (Barney et al., 2021; Peteraf, 1993). In information systems research, the RBV has been used to explain why IT investments alone do not produce uniform performance outcomes. Capabilities involving human expertise, organisational routines, integration and managerial processes determine how technology resources are combined and leveraged (Bharadwaj, 2000; Wade & Hulland, 2004).

Applied to this study, Strategic IT Planning, IT Governance and IT Capability are treated as organisational capabilities rather than physical technology assets. Strategic IT Planning coordinates IT investment with organisational priorities. IT Governance structures decision rights, accountability, monitoring and risk control. IT Capability enables the organisation to deploy, integrate, adapt and learn from IT resources. These capabilities are expected to strengthen Business Sustainability because they help SMEs allocate scarce resources, respond to technological change, maintain operational continuity and convert technology into longer-term organisational value.

2.2 Strategic IT Planning and Business Sustainability

Strategic IT Planning concerns the systematic alignment of IT initiatives, investments and resources with organisational strategy. Planning can clarify priorities, reduce fragmented investment, improve resource allocation and support proactive responses to technological change (Lederer & Sethi, 1988; Luftman et al., 2017). IT alignment research similarly suggests that value is more likely when technology priorities are coordinated with business objectives rather than developed independently (Chan & Reich, 2007).

From an RBV perspective, planning is an intangible managerial capability embedded in organisational knowledge and routines. In SMEs, where resources are constrained, systematic planning may be particularly relevant because poorly prioritised technology investments can consume scarce financial and managerial resources. Recent SME research on strategic planning and sustainability provides related evidence, although broader strategic planning is not identical to Strategic IT Planning (Sari et al., 2024). This study therefore proposes:

H1: Strategic IT Planning has a significant positive influence on Business Sustainability among SMEs in selected business sectors in Malaysia.

2.3 IT Governance and Business Sustainability

IT Governance refers to structures, processes and relational mechanisms that establish how IT-related decisions are made, monitored and aligned with organisational objectives (Weill & Ross, 2004; De Haes & Van Grembergen, 2015). Governance clarifies decision rights, accountability, risk management and investment evaluation. It can therefore reduce ambiguity in technology decision-making and support the disciplined use of limited organisational resources.

Prior research identifies IT governance as an important organisational mechanism and highlights the role of governance in alignment and organisational agility (Alreemy et al., 2016; Zhen et al., 2021). However, much of the sustainability literature addresses corporate governance, ESG governance or broader organisational governance. The direct relationship between IT Governance and Business Sustainability among Malaysian SMEs remains less developed. From an RBV perspective, governance routines can become embedded organisational capabilities that enhance the value derived from IT resources. Accordingly:

H2: IT Governance has a significant positive influence on Business Sustainability among SMEs in selected business sectors in Malaysia.

2.4 IT Capability and Business Sustainability

IT Capability refers to the organisation's ability to possess and deploy relevant technological knowledge, skills, infrastructure and routines in ways that support business objectives. Bharadwaj (2000) conceptualised IT capability as an organisational resource that can contribute to firm performance. Subsequent studies have linked IT-related capabilities to agility, innovation and operational outcomes (Chen et al., 2014; Mikalef et al., 2020). Digital transformation research also emphasises the importance of capabilities that allow firms to adapt technologies and organisational processes rather than simply acquire digital tools (Vial, 2019; Verhoef et al., 2021).

For SMEs, IT Capability may be especially consequential because the organisation's ability to use existing technology effectively can matter as much as the scale of its technology investment. Skills, learning, integration and the ability to adopt new technologies may determine whether technology supports operational efficiency and long-term resilience. Recent SME literature similarly highlights digital capability as an important foundation for competitiveness and sustainable outcomes (Fang et al., 2024; Kannan & Gambetta, 2025; Samsuden et al., 2024). Therefore:

H3: IT Capability has a significant positive influence on Business Sustainability among SMEs in selected business sectors in Malaysia.

2.5 Conceptual Framework

The empirical model specifies three direct paths to Business Sustainability:

Independent capability	Core role	Dependent outcome
Strategic IT Planning	Alignment, direction, prioritisation and IT investment planning	Business Sustainability
IT Governance	Accountability, decision rights, control, monitoring and IT risk management	Business Sustainability
IT Capability	IT expertise, employee skills, integration, adoption and utilisation	Business Sustainability

Conceptually, the framework proposes that SMEs that plan IT strategically, govern IT systematically and possess stronger organisational IT capabilities will report stronger Business Sustainability. The model tests direct relationships only; it does not test mediation or a sequential causal chain among the three predictors.

III. Methodology

3.1 Research Design

The study adopted a positivist research philosophy and a deductive approach. A quantitative cross-sectional survey design was selected because the research objectives required empirical measurement of constructs and statistical testing of hypothesised relationships. The design is consistent with the use of PLS-SEM for models involving multiple latent constructs and predictive assessment (Hair et al., 2022; Ramayah et al., 2022).

3.2 Population, Sampling and Respondents

The target population comprised SMEs operating in Malaysia across selected business sectors, including manufacturing, services, retail and other eligible business activities represented in the study sample. Purposive sampling was used to reach respondents with sufficient knowledge of organisational strategy and IT management. The respondent profile included owners, chief executive officers, senior managers and executives involved in strategic and/or IT-related decision-making.

A total of 320 structured questionnaires were distributed. Of these, 307 were returned, representing a response rate of 95.9%. Seven responses were excluded during screening because of incomplete responses or inconsistent answering patterns. The final analytical sample therefore comprised 300 valid responses.

Data collection	Result
Questionnaires distributed	320
Questionnaires returned	307
Response rate	95.9%
Excluded after screening	7
Valid responses analysed	300

3.3 Instrument and Measurement

The questionnaire used a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Each construct was measured with five items. Strategic IT Planning captured formal planning, alignment with business objectives, top-management participation, long-term IT investment and periodic review. IT Governance captured IT policies and procedures, decision roles, performance monitoring, risk management and investment evaluation. IT Capability captured IT expertise, employee skills, infrastructure support, technology adoption and the contribution of IT resources to operational efficiency. Business Sustainability captured sustainable growth, adaptability to market changes, long-term competitiveness, organisational resilience and continuous operational improvement.

Construct	Items	Examples of measurement focus
Strategic IT Planning (SITP)	5	Formal IT plan; IT-business alignment; top-management participation; long-term investment; periodic review
IT Governance (ITG)	5	Policies; decision responsibilities; monitoring; risk management; investment evaluation
IT Capability (ITC)	5	Expertise; employee skills; infrastructure; technology adoption; operational efficiency

Business Sustainability (BS)	5	Growth; adaptability; competitiveness; resilience; continuous improvement

3.4 Data Analysis

Data were screened and analysed using IBM SPSS Statistics and SmartPLS 4. The analysis proceeded through descriptive and measurement-model assessment before structural-model evaluation. Internal consistency and convergent validity were assessed using indicator loadings, Cronbach's alpha, composite reliability and average variance extracted (AVE). Discriminant validity was evaluated using the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT). Structural assessment included variance inflation factor (VIF), coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2) and path coefficients. Hypotheses were tested using bootstrapping with 5,000 resamples. Statistical significance was evaluated using the conventional $p < .05$ threshold, with two-tailed inference.

3.5 Ethical Considerations

Participation was voluntary and respondents were informed about the purpose of the study and their rights as participants. Responses were treated confidentially and reported in aggregate form. The study's methodology documented ethical considerations, including participant information, confidentiality, secure data handling and restricted access to research data.

IV. Results

4.1 Measurement Model

The measurement model demonstrated satisfactory convergent validity. The AVE values were 0.714 for Strategic IT Planning, 0.701 for IT Governance, 0.755 for IT Capability and 0.730 for Business Sustainability. All values exceeded the commonly used 0.50 threshold, indicating that each construct explained more than half of the variance in its indicators. The reported reliability analyses supported internal consistency, while Fornell–Larcker and HTMT assessments supported discriminant validity. These results provide an adequate basis for interpretation of the structural model.

Construct	AVE	Assessment
Strategic IT Planning	0.714	Convergent validity supported
IT Governance	0.701	Convergent validity supported
IT Capability	0.755	Convergent validity supported
Business Sustainability	0.730	Convergent validity supported

4.2 Structural Model

Multicollinearity was not problematic. The VIF values were 2.11 for Strategic IT Planning, 2.38 for IT Governance and 2.44 for IT Capability. The structural model explained 70.9% of the variance in Business Sustainability ($R^2 = 0.709$). Predictive relevance was supported by $Q^2 = 0.482$.

Hypothesis	Relationship	β	t	p	f^2	Decision
H1	Strategic IT Planning → Business Sustainability	0.281	4.521	< .001	0.132	Supported
H2	IT Governance	0.312	5.104	< .001	0.176	Supported

	→ Business Sustainability					
H3	IT Capability → Business Sustainability	0.426	7.683	< .001	0.348	Supported

All three hypotheses were supported. Strategic IT Planning, IT Governance and IT Capability each showed a positive and statistically significant relationship with Business Sustainability. Among the predictors, IT Capability had the largest path coefficient and effect size.

4.3 Research Objectives and Questions

Objective / Question	Empirical answer
RO1 / RQ1	Strategic IT Planning positively and significantly influences Business Sustainability ($\beta = 0.281$, $p < .001$).
RO2 / RQ2	IT Governance positively and significantly influences Business Sustainability ($\beta = 0.312$, $p < .001$).
RO3 / RQ3	IT Capability positively and significantly influences Business Sustainability ($\beta = 0.426$, $p < .001$).
RO4 / RQ4	IT Capability shows the largest relative contribution ($\beta = 0.426$; $f^2 = 0.348$), followed by IT Governance and Strategic IT Planning within the tested model and sample.

V. Discussion

5.1 Strategic IT Planning and Business Sustainability

The positive relationship between Strategic IT Planning and Business Sustainability indicates that SMEs with stronger mechanisms for aligning IT priorities with business objectives tend to report stronger sustainability outcomes. The finding is consistent with the strategic-alignment perspective, in which IT investment creates greater organisational value when it is coordinated with business priorities rather than treated as a collection of isolated technical projects (Chan & Reich, 2007; Luftman et al., 2017). It also complements evidence that structured strategic planning can support sustainability, adaptability and competitiveness among SMEs, while recognising that general strategic planning and Strategic IT Planning are not identical constructs (Sari et al., 2024).

From the RBV perspective, the result suggests that planning capability can function as an intangible organisational resource. The value is not simply the existence of an IT plan; it lies in the managerial routines through which technology priorities are connected to organisational objectives, investment decisions and changing business conditions. For resource-constrained SMEs, this alignment can help reduce fragmented investment and improve the use of scarce resources.

5.2 IT Governance and Business Sustainability

The positive relationship between IT Governance and Business Sustainability indicates that governance mechanisms are associated with stronger sustainable organisational outcomes. The finding supports the view that clear decision rights, accountability, risk management and performance monitoring help organisations coordinate technology resources and maintain alignment between IT activities and business priorities. It is also consistent with prior work linking IT governance mechanisms with organisational agility and strategic alignment (Alreemy et al., 2016; Zhen et al., 2021).

The finding adds a sustainability-oriented perspective to the IT governance literature. Governance is often framed as a control or compliance mechanism, but within SMEs it can also be understood as a capability that improves the quality and consistency of technology-related decisions. Under RBV, such routines can increase the value obtained from existing resources by ensuring that investments are evaluated, risks are considered and responsibilities are clear.

5.3 IT Capability and Business Sustainability

IT Capability demonstrated the strongest relationship with Business Sustainability. This result is particularly important because it shifts attention from technology ownership towards organisational competence. An SME may purchase modern technology but still fail to create sustainable value if employees lack the necessary skills, technology is poorly integrated, or the organisation cannot learn and adapt. The present result is consistent with the broader capability literature, which links IT and digital capabilities with agility, innovation and organisational outcomes (Bharadwaj, 2000; Chen et al., 2014; Mikalef et al., 2020).

The result is also compatible with recent SME evidence emphasising digital capability as an important foundation for competitiveness and sustainable business development (Fang et al., 2024; Kannan & Gambetta, 2025; Samsuden et al., 2024). In the present study, the effect-size analysis strengthens the interpretation because IT Capability had the largest f^2 (0.348), not merely the largest standardised path coefficient. The finding suggests that SMEs should view employee competence, technology integration, organisational learning and the capacity to adopt new technologies as strategic resources rather than as purely operational concerns.

5.4 Integrated Interpretation

Taken together, the findings support an integrated view of strategic IT management. Strategic IT Planning provides direction and prioritisation; IT Governance provides accountability, control and alignment; and IT Capability enables execution, integration and learning. These elements are complementary in managerial practice. However, the statistical model tested direct relationships only. It does not establish that planning causes governance, that governance causes capability, or that the three capabilities form a sequential causal chain. The integrated interpretation should therefore be understood as a conceptual synthesis rather than an empirically tested mediation or process model.

VI. Theoretical Contributions

6.1 Extending RBV in the SME IT Management Context

The study contributes to RBV by empirically examining three IT-related organisational capabilities within one model and linking them directly to Business Sustainability. The findings support the proposition that organisational value depends on how resources are managed and leveraged, rather than on resource ownership alone. This extends the application of RBV from generic technology capability towards a more differentiated set of planning, governance and execution capabilities.

6.2 Capability-Oriented Explanation of Sustainable Digital Value

The identification of IT Capability as the largest relative contributor provides a capability-oriented explanation of sustainable digital value. The finding suggests that the organisational ability to integrate, deploy, learn from and continuously improve IT resources is particularly important in the tested SME context. This adds nuance to technology-adoption perspectives by emphasising the organisational routines and skills required after technology is acquired.

6.3 Malaysian SME Context

The study adds empirical evidence from Malaysian SMEs, a context in which firms often operate with more limited resources than large enterprises while simultaneously facing strong pressure to digitalise. The results provide evidence that strategic IT management capabilities are relevant to sustainability in this setting and provide a basis for comparison with SME research in other countries and sectors.

VII. Practical and Policy Implications

7.1 Implications for SME Managers

- Integrate IT planning with business planning. IT investments should be linked to business priorities, expected value and long-term organisational objectives.
- Establish proportionate IT governance. SMEs do not necessarily require complex governance structures, but they should define decision responsibilities, risk ownership, investment review and performance monitoring.
- Prioritise IT capability development. Because IT Capability showed the largest relative contribution, managers should invest in employee digital skills, technical expertise, organisational learning, integration capability and the ability to adopt new technologies.
- Review IT capabilities periodically. Technology, skills and business needs change; capability reviews can identify gaps before they constrain operational continuity or growth.

7.2 Implications for Policymakers and SME Support Agencies

SME digitalisation programmes may be strengthened by moving beyond technology-adoption incentives towards capability-building. Training and advisory programmes can incorporate strategic IT planning, practical IT governance, digital skills, technology integration and organisational learning. Such programmes may help SMEs convert technology investments into longer-term organisational value rather than treating adoption itself as the primary success measure.

VIII. Limitations and Future Research

Several limitations should be considered when interpreting the findings. First, the cross-sectional design captures relationships at one point in time and therefore does not establish temporal change or causal effects. Second, purposive sampling and the focus on selected Malaysian SME sectors limit the extent to which the findings can be generalised to other populations, sectors or countries. Third, the study relies on self-reported questionnaire data, which may introduce response and common-method bias despite the measurement and screening procedures undertaken. Fourth, the model includes three strategic IT capabilities and does not explicitly test other potentially relevant factors such as digital leadership, organisational culture, innovation capability, strategic flexibility or environmental uncertainty.

Future studies could use longitudinal designs to examine how IT capabilities develop and influence sustainability over time. Multi-source data, including managerial assessments and objective organisational indicators, could reduce reliance on a single respondent perspective. Comparative studies across Malaysian industries and other countries could test the stability of the relationships. Future models could also examine mediation or moderation involving digital maturity, organisational resilience, innovation capability or environmental uncertainty. Dynamic Capabilities Theory, Institutional Theory and the Technology–Organisation–Environment framework may provide complementary explanations.

IX. Conclusion

This study examined Strategic IT Planning, IT Governance and IT Capability as predictors of Business Sustainability among SMEs in selected business sectors in Malaysia. Using a quantitative cross-sectional design and PLS-SEM with 300 valid responses, the study found that all three strategic IT capabilities were positively and significantly associated with Business Sustainability. The model explained 70.9% of the variance in Business Sustainability and demonstrated predictive relevance with $Q^2 = 0.482$.

The most prominent empirical finding is the relative contribution of IT Capability. It recorded the highest path coefficient ($\beta = 0.426$) and effect size ($f^2 = 0.348$), compared with IT Governance ($\beta = 0.312$; $f^2 = 0.176$) and Strategic IT Planning ($\beta = 0.281$; $f^2 = 0.132$). The result reinforces a central message for strategic IT management: sustainable digital value depends not simply on acquiring technology, but on the organisational ability to use, integrate, adapt and continuously improve technology resources.

By integrating Strategic IT Planning, IT Governance and IT Capability within an RBV-based framework, the study provides a coherent empirical account of how strategic IT management capabilities are associated with Business Sustainability in Malaysian SMEs. The findings provide a foundation for further research and practical capability development while recognising the limits of cross-sectional, purposive and self-reported data.

Declarations

Ethics approval and consent to participate
The study followed the ethical procedures documented in the research methodology. Participation was voluntary, participants were informed about the study, and responses were treated confidentially. The manuscript does not report personally identifiable participant information.

Consent for publication
Not applicable; no individually identifiable participant information is reported.

Competing interests
The author declares that there are no competing interests related to this manuscript.

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Data availability
The dataset contains research-participant responses and is therefore not publicly reproduced in this manuscript. Data availability may be considered by the author or relevant institution subject to applicable confidentiality and ethical requirements.

Author contributions
The author conceived the study, conducted the research, analysed the data and prepared the manuscript.

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