Artificial Intelligence as a Driver of Innovation and Sustainability in Digital Business: The Moderating Effect of Financial Management

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ABSTRACT

Artificial intelligence has emerged as one of the key drivers of innovation and sustainability in digital businesses. This study explores the impact of AI adoption on innovation and digital business sustainability in Indonesia, along with the moderating role of financial management in this relationship. The research uses Partial Least Squares-Structural Equation Modeling (PLS-SEM) with a purposive sample of owners and managers of digital businesses in Denpasar, Bali. Data were collected through structured questionnaires, then analyzed using SmartPLS 4.0. The findings indicated that AI adoption significantly enhanced innovation and digital business sustainability. Furthermore, financial management had a positive but relatively small moderating effect in enhancing the influence of AI on digital business sustainability. These results also signal that an appropriate AI investment strategy should be supported with relevant financial management in order to maximize all the benefits of AI. This study will be expected to provide a reference for digital business stakeholders, such as SMEs and startups, in the design of sustainable AI adoption strategies.

Keywords: *artificial intelligence, digital business innovation, business sustainability, financial management*

Introduction

AI technology has considerably changed different industries in regards to automating routine activities, freeing up employees' time to work on complex tasks requiring more creativity, and rationalizing workflows and processes for substantial cost savings and operational efficiency improvements [1]. AI is not only a tool for improving operational efficiency but also a catalyst for innovation and business sustainability, as it enhances decision-making processes by quickly and accurately analyzing vast amounts of data, improving the quality and effectiveness of business decisions, and enabling organizations to respond swiftly to market changes and consumer needs, thereby fostering innovation in product and service development [2]. By leveraging machine learning, natural language processing, and predictive analytics, AI enables businesses to streamline operations, reduce costs, and deliver personalized customer experiences by analyzing customer data to tailor services and recommendations, thereby fostering increased customer satisfaction and loyalty [3]. Its ability to analyze real-time data, predict market trends, and automate business processes has opened new opportunities for companies to create added value and enhance competitiveness. In the digital competitive era, each business enterprise should innovate and continuously adopt advanced technologies like AI for survival and sustenance. Fast development of AI, cloud computing, and the Internet of Things has equipped organizations with tools to optimize processes and create new business models [4]. While the technological capabilities themselves are important, how companies manage their financial resources also plays an essential part in AI adoption, given that effective financial management acts as a necessary ingredient for successfully embracing AI technologies, which, despite boosting operational efficiency and fueling revenue growth, often require substantial investments in complementary technologies and capabilities. Financial constraints, especially on the part of SMEs, may impede AI adoption due to an inability to allocate enough resources for both the technology and supporting infrastructure, such as data analytics and IoT systems that go with it [5]. Financial management, therefore, plays a regulating role in the extent to which AI can be used to achieve business objectives. AI technologies are revolutionizing traditional financial management by automating routine tasks such as data entry, risk assessment, and predictive analytics, freeing finance teams to work on strategic initiatives rather than being bogged down by repetitive processes, while AI systems analyze vast amounts of financial data to provide real-time insights that facilitate informed decision-making and adaptability to market changes [6].

Digital businesses, mainly e-commerce, have an outstanding prospect for great growth in Indonesia, as broad diffusion of smartphones has greatly improved the participation by consumers in all e-commerce activities [7]. E-commerce transactions' value in Indonesia, according to a report presented by the Indonesian E-Commerce Association, that is idEA, is likely to continue its growth impetus created by technology adoption

and evolving consumer behavior. Rapid access to the internet and the use of smartphones have created a fertile ground for digital businesses. The success of Tokopedia, Shopee, and Bukalapak has proven that technology can transform the face of digital business in Indonesia. They have transformed not only how consumers shop but have also inspired new waves of entrepreneurship in the digital space. However, this success conceals the following challenges: limited capital, economic uncertainty, and financial risks that very often impede firms in the optimal adoption of AI technology. Economic fluctuations make companies wary in extending the budget for new technologies like AI and thereby have to opt between choosing immediate survival or long-term investment in AI technology. This then leads to firms underinvesting probably in transformative technologies [8].

Adoption in the digital business sector of Indonesia is still at its infancy stage, where a number of firms face high costs of implementation, lack of technical expertise, and inadequate infrastructure. Among the key challenges that are faced by the businesses is the financial cost associated with acquiring, implementing, and maintaining AI systems, which, above all, is highly expensive for SMEs. Additionally, the general infrastructure for digitization in Indonesia is usually too weak to sustain more sophisticated AI applications. Factors such as obsolete systems and inequitable Internet access, further complicate the process of integrating AI into the system [9]. For instance, the SME sector-a backbone for the Indonesian economy-largely suffers from constrained budgets that hamper AI investment due to limited finances. Reports show that a shortage of financial resources is one of the main challenges faced by small and medium-sized enterprises (SMEs) in adopting digital technologies, including artificial intelligence (AI) [10]. Additionally, unclear regulatory frameworks and a lack of government support make the processes even more complex. Despite these challenges, small and medium-sized enterprises-SMEs-are the backbone of the Indonesian economy but often do not have the budget to invest in AI due to a shortage of financial capacity. Reports show that approximately 54% of SMEs identify a lack of financial resources as one of the main barriers to the adoption of digital technologies, including AI [11]. For example, AI-powered tools can enhance customer personalization through the analysis of consumer behavior and preferences, optimize supply chains by predicting demand and managing inventory, and enable data-driven decision-making by providing actionable insights. Advanced analytics platforms powered by AI help them unearth hidden patterns in data that could empower organizations to make informed decisions based on real-time insights [12].

Besides, integration of AI into digital business models may contribute a lot to the sustainability of businesses through fact-based decision-making and hence helping a business manage resources more efficiently with minimal waste. This is an important capability for sustainability that traditional methods fall short of accomplishing as effectively [13]. AI can significantly reduce operational costs and enhance sustainability by automating tasks, optimizing resource allocation, and minimizing waste. In sectors like waste management, AI has improved sorting efficiencies by 15% and resource recovery rates by 20%, contributing to both cost savings and environmental sustainability [14]. Furthermore, AI-driven analytics can help businesses identify sustainable practices and create long-term strategies aligned with environmental, social, and governance (ESG) principles. It also improves the efficiency of sustainability reporting, making it easier for companies to disclose their ESG performance transparently. This not only ensures compliance with regulatory requirements but also builds trust with stakeholders by providing clear insights into corporate sustainability efforts [15]. However, The successful implementation of AI for sustainability purposes requires robust financial management. AI-powered analytics identify and evaluate ecological issues to ensure firms can allocate their resources in the best possible manner. This does not only avoid waste but also contributes to sustainable practices by assuring effectiveness in the use of resources [16]. Companies need to plan their investments carefully, manage risks, and make their AI adoption consistent with overall financial goals. For SMEs, it is important to ensure that the use of AI aligns well with a larger business strategy. This comprises assessing costs and benefits from AI implementation, and making a strategic plan that would be viable and feasible in line with organizational resources according to [17]. In the absence of proper financial management, the benefit opportunities may not be materialized, and businesses could face possible financial instability. AI improves risk management through real-time data monitoring for potential vulnerabilities, proactive flagging of anomalies that may indicate financial risks, and timely interventions to mitigate these risks [18].

Despite the considerable number of studies on the impact of AI on digital business, there are still significant research gaps. First, most prior studies focus on the direct impact of AI on business performance without considering the moderating role of aspects such as financial management. Second, most available studies were conducted for developed countries where both the infrastructure and the business atmosphere are already well-entrenched; thus, their applicability to contexts in developing countries like Indonesia is relatively low. Third, few studies incorporate the aspect of business sustainability within the framework of AI adoption, although sustainability is one of the important issues in the digital era full of uncertainties. Originality for this study lies in attempting to fill such gaps by incorporating financial management as a moderating variable, focusing on the Indonesian context, and embedding the concept of innovation-sustainability into the analytical framework. Therefore, the study will investigate not only how AI directly influences innovation and business sustainability but also how financial management can weaken or strengthen this relationship.

The above phenomena are based on the fact that this research tries to find out how AI potentially improves innovation and sustainability of digital business, how financial management acts as a moderator in such relationships. The basic question it tries to answer is the extent to which companies could utilize AI to reach innovation and business sustainability, and how much good financial management can help solidify this relationship. The expected contribution will be theoretical and practical. Theoretically, this research will enrich the literature on the role of AI in digital business and how financial management can moderate this relationship. The practical contribution of this research can be used as a reference for business actors, especially startups and SMEs in Indonesia, to design an AI adoption strategy supported by effective financial management. In addition, this study can also be used as input for the government and stakeholders to formulate policies supporting the growth of AI-based digital businesses. Therefore, this research is relevant to current technological developments and responds to the actual needs of business actors in Indonesia amidst the challenges and opportunities of the digital era.

Resource-Based View (RBV)

The Resource-Based View is grounded in the belief that the sources of a firm's competitive advantage may be realized through its internal resources, especially those that are valuable, rare, inimitable, and non-substitutable. Whereas earlier perspectives rested their arguments on the external market analysis, RBV focuses on how a firm can exploit its unique internal capabilities and assets in gaining strategic advantage. This perspective, therefore, invites the firms to create, protect, and continuously develop their core competencies and resources that may result in long-term sustained competitive advantages [19].

Sustainability of such competitive advantage depends upon the ability of the firm to maintain uniqueness and value of its resources from competitors. If the competitors can easily imitate or substitute such resources, then the advantage may get dissipated. Hence, firms should invest in shielding and developing their VRIN resources if they are to achieve success in the long run [20]. By shifting focus from external pressures to internal strengths, the RBV lays out a theoretical framework through which firms can align resources with goals internally in strategy, building resilience and innovation in dynamic market environments.

In the context of this study, AI could be considered one of the strategic resources in reinforcing competitive advantage; for instance, it enables continuous innovation and prolongs digitalized business operations. On the contrary, successful implementation of AI applications greatly relies on the firm's ability to effectively manage financial resources in order to support investment and implementation of the technology. Effective financial management will help in providing adequate resources toward AI initiatives, such as funding technology acquisition, training staff, and maintaining AI systems. Those firms that strategically invest in AI can enhance their operational efficiency and decision-making capabilities, leading to improved performance and a stronger competitive advantage [21].

AI technologies can help achieve a number of benefits in automating routine tasks, reducing labor costs, and smoothing workflow. Financial institutions can handle vast amounts of data using AI and reduce operations costs, hence increasing productivity since human resources are freed up and can now be used for higher-order and strategic tasks. Therefore, it is relevant that financial strategies should be aligned with AI adoptions to realize its fullest potential toward achieving long-term success for the organization.

TOE Framework: Technology-Organization-Environment

TOE Framework: In any organization, three factors that focus on technology, organization, and environment may influence the adoption of technology. The following framework represents a holistic view of technology adoption, integrating the interrelated dimensions of technology adoption and thus offering an insightful look at the process of adoption [22]. These organizational factors will be influenced in terms of the study's influence on the adoption of AI as technology, namely, financial management about the firm's financial capability and environmental factors involving market competition and government regulations. Financial management at the organizational level is the crucial factor that creates a difference in the level at which AI is adopted and used to fuel innovation for sustained digital business operations. It thus plays an important role in costing the investments into AI to make sure maximum benefits are gained from resources. Research has shown that organizations that adopted AI saw massive improvements in operational efficiency due to automation and sophisticated analytics; such streamlining of processes helped them come to better decisions [23].

AI also transforms risk management processes through predictive analytics and sophisticated pattern recognition, therefore enabling organizations to identify potential fraud and manage the associated risks effectively accordingly [24]. However, in view of the dynamic nature of AI technologies, there is the need for continuous review and revisiting of financial strategies. Good financial management embeds a culture of continuous improvement by allowing for investments in new technologies that drive innovation, with an assurance that such would yield positive financial results [25].

By aligning the financial strategy with AI adoption, organizations can achieve not only operational performance but also long-term competitiveness in light of a digital business environment. This emphasizes the importance of financial management to act as an enabler for AI integration and successful innovation.

Hypothesis 1:

AI has positive impacts on innovation and digital business sustainability, thus playing a transformational role across industries. For instance, in the tourism industry, AI in sustainable entrepreneurship allows the integration of environmental concerns in business operations. This promotes innovations that address some of the major challenges of social equity and economic sustainability, thereby making businesses operate more responsibly and inclusively [26]. AI integrated with other digital technologies has a significant enhancement effect on the innovation capability. This synergy accelerates product development, improves resource utilization, and boosts operational efficiency, ultimately reducing environmental impact. By leveraging AI, organizations can achieve more sustainable and efficient business operations, aligning innovation with environmental goals [27].

Moreover, firms that invest in both digitalization and sustainability tend to achieve better Corporate Social Responsibility (CSR) outcomes. The interplay between these strategies fosters a more coordinated approach to sustainable business practices, ensuring that innovation efforts contribute to long-term social and environmental benefits [28]. AI also plays a critical role in driving knowledge innovation and improving product development efficiency within organizations. The fact that it can process huge volumes of data and provide valuable insights to the firms enables them to innovate better; hence, it is considered one of the most important enablers for achieving innovative and sustainable performance [29].

Hypothesis 2:

Financial management moderates the relationship between AI and innovation/digital business sustainability.

It works as a moderator for AI and innovation/digital business sustainability because, through it, AI-driven initiatives have greater effectiveness. It has to be an integral part of the juncture where AI, financial management, and innovation will combine together for digital business sustainability. An organization with proper integration of all elements would also result in attaining the ESG criteria and thereby align business operations to overall sustainability goals.

For instance, it is evident that AI has a significant role in enhancing sustainable finance strategies through developing efficient usages of resources and encouraging green investments. This shows clearly how AI, together with good management in financial matters, can favor innovation and sustainability [30]. On the other side, this work also underlines that while AI can enhance such innovative financial habits, it itself may not provide substantial influences on market share solely without efficient finance management strategies. In this context, investments into AI also should be combined with relevant fiscal politics for its adequate exploitation and for long-term competitiveness [31].

Research Methods

This research is conducted in Denpasar, Bali, focusing on companies operating in the digital business sector, including SMEs and startups. Denpasar is selected as the research location because it represents a rapidly growing digital market, where the adoption of technology—particularly artificial intelligence (AI)—is advancing but also facing challenges related to limited infrastructure, financial capacity, and digital divides. The city presents a unique blend of traditional business practices and digital modernization, making it an ideal setting to examine the adoption and impact of AI technologies. The population of this study includes digital-based business units in Denpasar that fall into the categories of SMEs and startups, particularly those operating in e-commerce, FinTech, and digital logistics. Based on data from local startup communities and digital business directories, it is estimated that there are around 500–800 active entities in the area. A purposive sampling technique is used to select respondents who meet the following criteria: business owners or managers of digital enterprises, businesses that have adopted or are currently considering the adoption of AI technologies, respondents with basic knowledge of AI and financial management, and those willing to participate and provide reliable data. The determination of the sample size follows the rule of thumb in Partial Least Squares Structural Equation Modeling (PLS-SEM), which recommends multiplying the number of indicators by 5 to 10. Assuming the use of approximately 15 indicators in the model, a minimum of 150 respondents is required [32]. However, to ensure model stability and result generalizability, the targeted sample size is set at 200 respondents, which is considered sufficient for data validity and population representation.

Data collection will be carried out through the online distribution of questionnaires using platforms such as Google Forms or Qualtrics for ease of access. Initial contact with potential respondents will be made through local startup networks, digital business communities, social media, and professional networks. To encourage participation, respondents will be provided with brief information about the research objectives, data confidentiality assurances, and the estimated time needed to complete the questionnaire. A snowball sampling approach will also be applied by asking initial participants to refer other eligible respondents.In the meantime, a structured questionnaire serves as the research instrument, purposed to measure key variables represented in this study by AI Adoption-meaning, the extent to which AI technologies have been employed within company operations; Innovation-that means the ability of AI to enhance the company's innovation capabilities; Digital Business Sustainability-that refers to the economic, social, and environmental benefits given by AI to the

organization; and Financial Management-that denotes how financial management will support such an adoption towards achieving sustainability. The measurement will be based on a Likert scale, from 1 to 5, where 1 represents Strongly Disagree and 5 represents Strongly Agree. Items have been designed to express the relationship among AI adoption, innovation, digital business sustainability, and the moderating role of financial management.

Data analysis has been done using Partial Least Squares Structural Equation Modeling (PLS-SEM) by means of SmartPLS 4.0 software. PLS-SEM is chosen based on the fact that the method can analyze complex relationships of latent variables and indicators and is appropriate to be applied for models with relatively small sample sizes [33]. Analysis is done in two steps, namely the Measurement Model, which checks the validity and reliability of indicators for each variable, and the Structural Model, which tests the causal relationship between variables, including the moderating effect of financial management. Such an analysis is targeted to reveal a direct impact of AI adoption on innovation and sustainability of digital business, the role of innovation as a mediator between AI and sustainability, and financial management as a moderator that could strengthen or weaken these relationships. It deeply affords insight both into how AI can drive innovation and sustainability for the digital business and into the very core of financial management, as illustrated in Figure 1. Research Model.
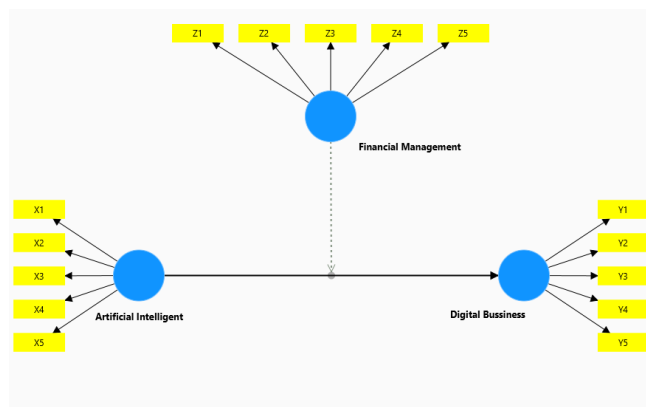

Figure 1. Research Model

Results and Discussion

Descriptive Analysis

Table 1. Descriptive Statistics Table

Characteristics	Category	Number	Percentage (%)
Gender	Male	107	53.50%
	Female	93	46.50%
Age	< 25 years	42	21.00%
	25 - 34 years	78	39.00%
	35 - 44 years	56	28.00%
	≥ 45 years	24	12.00%
Position	Owner	112	56.00%
	Manager	88	44.00%
Business Sector	E-commerce	83	41.50%
	FinTech	64	32.00%
	Logistics	53	26.50%
Education Level	High School or equivalent	29	14.50%
	Diploma/Bachelor's (S1)	128	64.00%
	Postgraduate (S2/S3)	43	21.50%
Business Experience	< 3 years	48	24.00%
	3 - 5 years	79	39.50%
	> 5 years	73	36.50%

From Table 1, the respondent characteristics show quite a good balance in the gender distribution, with 53.5% being male and 46.5% being female. For age, most of them fall into the category of 25–34 years at 39.0%, followed by 28.0% who are in the 35–44-year-old category, while younger respondents under 25 constitute 21.0%, and those aged 45 and above form the smallest portion at 12.0%. Regarding their roles in the business, 56.0% reported ownership, while 44.0% are managers; this means that the majority of decision-makers in digital businesses participated in this study.

The business sectors that dominate are e-commerce with 41.5% of respondents, FinTech with 32.0%, and logistics with 26.5%. Meanwhile, the education background is dominated by diploma/bachelor graduates, 64.0%; followed by postgraduate education (S2/S3), 21.5%; and high school/equivalent, 14.5%. Business experience can be further detailed: 39.5% have 3–5 years of experience; 36.5% have more than five years; while 24.0% are relatively new entrepreneurs with less than three years of experience. These characteristics show that the study predominantly consists of experienced professionals and decision-makers in the digital business sector in Denpasar, Bali, with diverse educational backgrounds and business expertise. This ensures that insights gathered regarding AI adoption, innovation, and business sustainability reflect informed perspectives from key industry players..

Reliability and Validity Test

Table 2. Cosntruct Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Artificial Intelligent	0.790	0.894	0.848	0.552
Digital Bussiness	0.790	0.925	0.848	0.571
Financial Management	0.815	0.941	0.892	0.670

The reliability and validity analysis of the constructs Artificial Intelligence, Digital Business, and Financial Management from table 2 have been proven to have strong internal consistency and measurement reliability. The overall Cronbach's Alpha values for all three constructs are above the threshold of 0.7, with both Artificial Intelligence and Digital Business at 0.790 and Financial Management slightly higher at 0.815. This indicates that the items used in measuring each construct are internally consistent and reliable. Further supporting this very robust measurement model is the fact that both rho_a and rho_c are well above the threshold limit of 0.7. Regarding rho_a, for Artificial Intelligence it was 0.894; for Digital Business, 0.925; and for Financial Management, it was 0.941-which are quite great reliability coefficients. For rho_c, its values were the following: Artificial Intelligence, 0.848; Digital Business, 0.848; and Financial Management, 0.892-all of which therefore give further support to the consistency of the constructs.

Finally, the AVE values also showed an acceptable level of convergent validity: Artificial Intelligence 0.552, Digital Business 0.571, and Financial Management 0.670, all of which have passed the threshold level of 0.5. In other words, over 50% of the variances of indicators could be justified by the latent constructs in this research study. From this perspective, all the aforementioned findings provide further support for the constructs within this research to be acceptably reliable and valid for further structural analysis.

Hypothesis Test
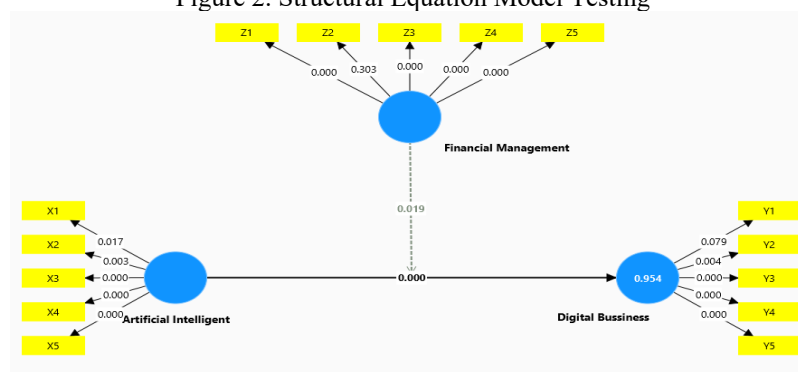
Figure 2. Structural Equation Model Testing

Table 3. Regression Weight Structural Equational Model.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Artificial Intelligent -> Digital Bussiness	0.833	0.805	0.090	9.284	0.000
Financial Management x Artificial Intelligent -> Digital Bussiness	0.033	0.031	0.014	2.337	0.019

The results of the structural model analysis from Figure 2 and Table 3 show significant relationships between the constructs under study. The path coefficient from AI to Digital Business is 0.833, showing a very high positive influence. Its T-statistic has reached a level of 9.284 over the critical ratio of 1.96 and a p-value of 0.000, so at 0.05 significant levels, this path may be regarded as significant. Therefore, in such a case, the higher the adoption of AI, the better it is thought to influence growth and sustainability of digital businesses.

Further, the path coefficient for the moderating effect of Financial Management on the relationship between AI and Digital Business is 0.033, small but still significant at T = 2.337 and p = 0.019. This therefore means that financial management has a positive but slight moderating effect, implying that good financial management slightly enhances the impact of AI on digital business performance. Overall, results show that AI adoption itself is a main driver of digital business success, and the relationship is complementary because the enhancing role of financial management appears to be comparably weaker than the direct impact of AI.

Discussion

The findings of this study confirm the adoption of the two hypotheses, stating that AI is indeed a driver of innovation and digital business sustainability, and that financial management positively moderates the relationship.

Role of AI in Fostering Innovation and Sustainability of Digital Business

The results prove that AI has a significant impact on driving innovation and the sustainability of digital business. This supports existing literature indicating that AI fosters transformative changes across various industries, including tourism, where AI-driven sustainable entrepreneurship integrates environmental considerations into business operations. By addressing social equity and economic sustainability challenges, AI enables businesses to operate more responsibly and inclusively. In addition, AI integrated with digital technologies enhances innovative capability through faster product development, better utilization of resources, and operational efficiency. Such synergy between AI and business performance has also contributed much to environmental concerns through a reduction in generating waste or minimizing carbon emission.

Organizations that emphasize digitalization and issues of sustainability are likely to achieve better CSR performances. The interplay between AI, innovation, and sustainability promotes a more structured approach to responsible business practices, ensuring long-term environmental and social benefits. AI's ability to process vast amounts of data allows firms to gain critical insights, facilitating informed decision-making that enhances product development and overall innovation. As a result, AI is increasingly recognized as a fundamental driver of innovative and sustainable business practices.

Moderating Effect of Financial Management

Findings also reveal a significant moderation developed by financial management in the interface between the extent of AI and innovation/digital business sustainability. That effective financial management integrates the chosen AI driven initiative for effective functioning of business operation. The said integration further leads to integrating necessary AI, Financial Management, Innovation, for DBS. Those able to combine these elements will be in a better position to work their business processes in accordance with ESG criteria, further reinforcing their sustainability pledge.

AI also contributes to sustainable finance strategies through resource optimization and green investment. Consequently, AI if combined with good financial management practices can lead to increased innovation and sustainability in company operations. However, even as AI may help enhance the core financial practices of a business, driving market competitiveness without robust supporting financial policies is impossible. It therefore goes that businesses need to integrate investments in AI with strong financial policies to support it and exploit its benefits in ensuring long-term competitiveness fully.

Managerial Implications

This study has provided useful lessons for business leaders and policymakers. Managers should focus on investing in AI-driven innovations while ensuring that the financial management strategy supports such initiatives. This can be achieved by integrating AI into effective financial planning, hence fostering business sustainability and increasing efficiency. Besides, it is crucial for an organization to focus on digital literacy and

financial training programs in a way that can help AI achieve long-term success. Policymakers may provide fiscal incentives and regulatory support for companies to adopt AI technologies in sustainable ways.

Limitations and Avenues for Future Research

Despite these contributions, there are a couple of shortcomings associated with this present study. Firstly, being grounded in specific geographical region confines its generalization capability across various markets. From this perspective, a future research direction may enlarge the sample emanating from various cultural and economic backgrounds. Second, given a higher reliance on cross-sectional data, the survey results cannot aptly capture long-term consequences due to the use of AI adoptions. Longitudinal research could fill in more detailed information on how AI influences the sustainability of digital business over a period of time. Finally, even though the study identifies financial management as a moderator, other potential moderating variables such as organizational culture and technological infrastructure should also be considered in future studies.

Conclusion

These findings suggest that AI could help enable innovation and digital business sustainability but at the same time indicate that the relationship may importantly be intermediated by financial management. Those firms that can manage AI strategically together with strong financial governance will enjoy better innovation, sustainability, and long-term success.

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