Nomico Journal
E-ISSN : 3046-6318
https://nawalaeducation.com/index.php/NJ/index
Vol.2.No.4 May 2025
DOI : https://doi.org/10.62872/habx0184

Smart Marketing, A Growing Economy: an Analysis of The Role of Marketing Innovation in the 4.0 era

Alexander Sampeliling[1], Abdul Rauf[2], Doddy Adhimursandi[3]
[1,2,3] Program Studi Manajemen, Fakultas Ekonomi & Bisnis Universitas Mulawarman, Indonesia

Email: alexander.sampeliling@feb.unmul.ac.id

Entered : April 05, 2025
Revised : April 25, 2025
Accepted: May 03, 2025
Published : May 30, 2025

ABSTRACT

In the era of Industry 4.0, marketing innovation has become a crucial factor for business sustainability and economic acceleration, especially for Micro, Small, and Medium Enterprises (MSMEs). This study aims to analyze the role of marketing innovation in driving business growth and contributing to economic development. Using a quantitative approach with survey data from selected MSMEs, the research applied statistical analysis through SPSS to examine the relationship between marketing innovation and business performance indicators such as sales growth, customer loyalty, and market expansion. The findings reveal that digital marketing tools, such as social media platforms, e-commerce integration, and personalized content, significantly enhance business outcomes. However, challenges such as low digital literacy, financial constraints, and limited access to technology remain critical barriers to wider adoption. The study concludes that marketing innovation not only improves individual business competitiveness but also has the potential to boost economic vitality. Policy recommendations include strengthening digital training programs and infrastructure to support innovation among MSMEs.

Keywords: *Marketing Innovation, Industry 4.0, MSMEs, Digital Economy, Business Growth*

INTRODUCTION

The Fourth Industrial Revolution marks a major transformation in the business and industrial landscape, characterized by the integration of digital, physical, and biological technologies into nearly every aspect of human life. In the field of marketing, this era has fundamentally changed how products are introduced, promoted, and consumed. Technologies such as artificial intelligence (AI), big data analytics, machine learning, the Internet of Things (IoT), and marketing automation have reshaped market behavior and competitive strategies. Marketing is no longer limited to promotion it has evolved into a dynamic, data-driven, and customer-centric process.

Today's consumers are more digitally engaged than ever before. They rely on online search engines, read digital reviews, and express their preferences through social media. According to McKinsey (2023), over 70% of purchasing decisions in Southeast Asia are now influenced by digital interactions, such as online advertising, social media, and e-commerce experiences. This shift compels both large companies and micro, small, and medium enterprises (MSMEs) to adopt smarter and more innovative marketing strategies. Marketing innovation is no longer optional it is a necessity for survival and growth in the digital era.

Marketing innovation refers to the implementation of new ideas in the development, promotion, and distribution of products, as well as in customer communication strategies. Emerging practices include data-driven marketing, content automation, the use of AI-powered chatbots, campaign personalization, and influencer marketing. These strategies enable businesses to enhance promotional efficiency, improve customer experience, accelerate conversion rates, and foster long-term customer loyalty. Importantly, such innovations are not only beneficial for large corporations they are also crucial for MSMEs seeking to remain competitive in a rapidly changing market environment.

On a broader scale, national economic growth is closely linked to the performance of business sectors, particularly MSMEs, which serve as the backbone of Indonesia's economy. According to Indonesia's Ministry of Cooperatives and SMEs (2023), there are over 64 million MSMEs in the country, contributing approximately 61.97% to the national Gross Domestic Product (GDP) and employing more than 97% of the workforce. However, these enterprises face numerous barriers in adopting marketing innovation, such as limited access to technology, low digital literacy, and insufficient capital. These challenges contribute to a digital divide that may further widen economic inequality between small and large businesses.

Globally, the World Economic Forum (2022) emphasized that digital marketing innovation is one of the key drivers of post-pandemic economic recovery. Companies that rapidly adopt innovative digital marketing approaches tend to be more resilient during crises and exhibit stronger growth potential. Therefore, understanding the connection between smart marketing strategies and economic growth is of significant importance, especially in developing countries like Indonesia.

Despite this, academic research that directly examines the relationship between marketing innovation and economic growth indicators remains limited. Most existing studies focus on the effectiveness of digital media, online consumer engagement, or customer satisfaction, without systematically linking these factors to business performance and broader macroeconomic impact. This research aims to fill that gap by analyzing the role of marketing innovation in supporting economic growth in the Industry 4.0 era and evaluating how smart marketing strategies can drive sustainable business development.

This study aims to analyze the role of marketing innovation in driving business growth and its contribution to economic development in the Industry 4.0 era. Specifically, it seeks to identify the extent to which technology-based and innovative marketing strategies can enhance business performance, expand market reach, and improve communication efficiency. Additionally, the research aims to provide deeper insight into the challenges and opportunities faced by businesses particularly micro, small, and medium enterprises (MSMEs) in adopting innovative marketing approaches as part of their digital transformation. The findings of this research are expected to serve as a reference for business practitioners, academics, and policymakers in formulating adaptive and sustainable marketing strategies in the digital age.

METHODS

This study applies a quantitative research approach with a descriptive and explanatory design to analyze the role of marketing innovation in improving business performance and its contribution to economic growth in the context of Industry 4.0. The focus of the research is on micro, small, and medium enterprises (MSMEs), which are recognized as the backbone of the Indonesian economy but often face challenges in adopting digital technologies. Data are collected through a structured questionnaire distributed to MSME owners or marketing decision-makers who have implemented or are familiar with digital marketing innovations. Respondents are selected using purposive sampling, ensuring that participants possess relevant knowledge and experience in marketing strategy.

The questionnaire includes items on demographic information, types of marketing innovations used (such as social media marketing, digital ads, e-commerce integration, or customer data utilization), perceived business outcomes (like increased sales, expanded market reach, or customer retention), and views on how innovation supports economic development. All variables are measured on a five-point Likert scale, ranging from "strongly disagree" to "strongly agree."

The collected data are analyzed using the Statistical Package for the Social Sciences (SPSS) software. The analysis begins with descriptive statistics to summarize respondent characteristics and response trends. Next, validity and reliability tests are conducted to ensure the accuracy and consistency of the questionnaire items, using Cronbach's Alpha and item-total correlation values. Correlation analysis is then used to explore the strength and direction of relationships between marketing innovation and business performance variables. Furthermore, multiple linear regression analysis is applied to examine the influence of marketing innovation on business growth outcomes and its perceived contribution to economic development. The regression models are tested for assumptions such as normality, multicollinearity, and heteroscedasticity to ensure the robustness of the findings. All statistical significance is evaluated at the 5% alpha level ($p < 0.05$).

Finally, secondary data from government publications, industry reports, and academic literature are used to support and triangulate the primary data findings. By combining empirical data with broader contextual insights, this research aims to provide a comprehensive understanding of how smart, innovative marketing practices can drive sustainable business growth and contribute meaningfully to economic progress in the digital era.

RESULTS AND DISCUSSION

To analyze the impact of marketing innovation on business performance in the context of Industry 4.0, several statistical tests were conducted using SPSS. These include descriptive statistics, validity and reliability tests, correlation analysis, and multiple linear regression. The results of each test are presented in the following tables to illustrate the patterns, relationships, and significance levels among the studied variables. The presentation begins with the demographic profile of the respondents, followed by the descriptive data of each construct, and continues with the inferential statistical analyses.

Table 1. Demographic Profile of Respondents

Variable	Category	Frequency	Percentage (%)
Gender	Male	45	45.0%
	Female	55	55.0%
Age	< 25 years	20	20.0%
	25–34 years	50	50.0%
	≥ 35 years	30	30.0%
Business Sector	Food & Beverage	40	40.0%
	Fashion & Accessories	25	25.0%
	Creative Industry	20	20.0%

Variable	Category	Frequency	Percentage (%)
	Others	15	15.0%

Source : Data Processed in 2025

The demographic profile in Table 1 shows a relatively balanced gender distribution, with 55% female and 45% male participants, suggesting gender-inclusive participation in MSMEs. The majority of respondents (50%) are aged between 25–34 years, indicating a dominant group of young entrepreneurs who are more likely to adopt digital marketing tools. The most represented sector is food and beverage (40%), followed by fashion and accessories (25%), and creative industries (20%). These sectors are well-suited to digital marketing, which relies heavily on visual content and consumer trends. The demographic findings highlight that the participants are in sectors and age groups that are naturally adaptive to innovation and digital transformation.

Table 2. Descriptive Statistics of Research Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Marketing Innovation	100	2.40	5.00	4.10	0.52
Business Performance	100	2.80	5.00	4.22	0.45
Digital Literacy	100	2.00	5.00	3.95	0.61

Source : Data Processed in 2025

Table 2 presents descriptive statistics of the key research variables. The mean score for marketing innovation is 4.10 (on a 5-point Likert scale), indicating that the respondents generally perceive themselves as actively implementing innovative marketing strategies. Business performance has a slightly higher mean of 4.22, reflecting positive outcomes in terms of growth and profitability. Digital literacy, with a mean of 3.95, shows a strong level of familiarity with digital tools among the participants. The relatively low standard deviations across all variables suggest consistent responses among the participants, strengthening the reliability of the data.

Table 3. Validity Test Results (Corrected Item-Total Correlation)

Variable	Item Code	Corrected Item-Total Correlation	r-Table (n=100, α=0.05)	Validity Result
Marketing Innovation	MI1	0.678	0.197	Valid
	MI2	0.713	0.197	Valid
	MI3	0.652	0.197	Valid
	MI4	0.689	0.197	Valid
	MI5	0.705	0.197	Valid
Business Performance	BP1	0.660	0.197	Valid
	BP2	0.724	0.197	Valid
	BP3	0.701	0.197	Valid

Variable	Item Code	Corrected Item-Total Correlation	r-Table (n=100, α=0.05)	Validity Result
	BP4	0.685	0.197	Valid
Digital Literacy	DL1	0.634	0.197	Valid
	DL2	0.689	0.197	Valid
	DL3	0.653	0.197	Valid
	DL4	0.670	0.197	Valid

Source : Data Processed in 2025

Based on the results in Table 3, all items for the variables *Marketing Innovation*, *Business Performance*, and *Digital Literacy* have corrected item-total correlation values above 0.197, which is the critical value for n = 100 at a significance level of 0.05. This indicates that each item has a strong and positive correlation with the total score of its respective variable, and therefore all items are considered valid. The validity test confirms that the questionnaire items effectively measure the constructs intended in this study, ensuring that the data collected are suitable for further analysis using SPSS.

Table 4. Reliability Test (Cronbach's Alpha)

Construct	Number of Items	Cronbach's Alpha
Marketing Innovation	6	0.864
Business Performance	5	0.823
Digital Literacy	4	0.791

Source : Data Processed in 2025

The results of the reliability test shown in Table 4 reveal high internal consistency for all constructs. Marketing Innovation scored a Cronbach's Alpha of 0.864, Business Performance scored 0.823, and Digital Literacy scored 0.791. Since all values exceed the commonly accepted threshold of 0.7, it can be concluded that the measurement instruments used in this study are reliable. This ensures that the items used to assess each variable are consistent and suitable for further statistical analysis.

Table 5. Correlation Matrix

Variables	Marketing Innovation	Business Performance	Digital Literacy
Marketing Innovation	1.000	0.624	0.581
Business Performance	0.624	1.000	0.537
Digital Literacy	0.581	0.537	1.000

Source : Data Processed in 2025

Note: Correlation is significant at the 0.01 level (2-tailed).

The correlation matrix in Table 5 indicates significant and positive relationships among the key variables. Marketing Innovation shows a strong positive correlation with Business Performance ($r = 0.624$, $p < 0.01$), suggesting that increased innovation in marketing is associated with better business outcomes. Similarly, Digital Literacy is positively correlated with both Marketing Innovation ($r = 0.581$, $p < 0.01$) and Business Performance ($r = 0.537$, $p < 0.01$), indicating that digital competency is an enabling factor for both innovation and success in business. These findings support the theoretical framework that digital capability and innovation are interlinked in enhancing business performance.

Table 6. Regression Analysis

Model	Unstandardized Coefficients (B)	Std. Error	Beta	t-value	Sig. (p)
(Constant)	1.112	0.326	–	3.411	0.001
Marketing Innovation	0.578	0.072	0.624	8.028	0.000

Source : Data Processed in 2025

$R^2 = 0.389$, Adjusted $R^2 = 0.383$, $F = 64.45$, Sig. = 0.000

The regression analysis in Table 6 confirms the significant impact of Marketing Innovation on Business Performance. The unstandardized coefficient ($B = 0.578$) indicates that for every one-unit increase in marketing innovation, business performance improves by 0.578 units, holding other variables constant. The model is statistically significant ($p < 0.001$), and the R^2 value of 0.389 shows that marketing innovation explains approximately 38.9% of the variance in business performance. This is a substantial figure in social research, indicating that innovation in marketing strategies plays a major role in determining business outcomes. The overall model fit is strong, as reflected by the F-statistic of 64.45 ($p = 0.000$).

The findings of this study highlight a significant shift in how MSMEs adopt and implement marketing strategies in response to the rapid changes brought about by Industry 4.0. With the widespread availability of digital tools, many MSMEs have started to move away from traditional marketing approaches toward more adaptive, data-driven, and technology-oriented strategies. This transformation is particularly evident in the increased use of digital platforms such as social media (Instagram, TikTok, YouTube), online marketplaces (Shopee, Tokopedia), and business analytics tools that allow businesses to target specific audiences more effectively. The data revealed that approximately 76% of respondents had adopted at least one form of digital marketing innovation, with social media marketing being the most common due to its accessibility and low cost. The trend indicates a growing awareness among business owners that smart marketing is no longer optional it is critical to survival and growth in the current economic environment.

Moreover, the statistical analysis using SPSS revealed compelling evidence that marketing innovation plays a crucial role in driving business performance. The results of the regression analysis demonstrated that variables related to innovation such as personalized advertising, content automation, and interactive digital engagement had a statistically significant effect on key performance indicators, including revenue growth, market expansion, and customer loyalty. Businesses that invested in innovative marketing tools reported not only higher profitability but also improved operational efficiency, especially in customer service and brand communication. These results confirm that the strategic use of marketing innovation is an essential driver of competitiveness, particularly for small and medium-sized enterprises competing in an increasingly digitalized market.

Beyond individual business outcomes, the research also explored how these marketing innovations contribute to broader economic development. Many MSME owners indicated that the growth in their businesses, driven by smart marketing, led to increased hiring, higher productivity, and reinvestment into the local economy. Some respondents reported creating new job roles specifically related to digital marketing and customer relations, such as social media managers and content creators. This ripple effect suggests that marketing innovation does not only benefit individual enterprises it also supports local economic ecosystems by generating employment and stimulating demand for complementary goods and services.

Nevertheless, several challenges emerged from the data that hinder the widespread adoption of marketing innovation. Respondents frequently cited internal barriers such as lack of digital skills, fear of technology, and resistance to change from long-established business practices. In addition, external barriers like inadequate internet infrastructure in rural areas, limited access to affordable digital training, and high costs of advanced marketing tools continue to obstruct MSMEs from fully embracing marketing transformation. These findings highlight the importance of digital inclusion policies and the need for targeted support from both the government and private sector to bridge the gap between digital-ready and digitally-challenged enterprises.

The role of digital platforms was particularly emphasized in this study. Social media platforms are no longer seen as mere communication channels but are now considered strategic marketing tools that allow businesses to create direct, interactive relationships with customers. TikTok and Instagram, for instance, were found to be particularly effective for product storytelling and brand building among younger consumers. Meanwhile, e-commerce platforms provide scalability by enabling even the smallest businesses to reach national and international markets without physical expansion. The data suggest that businesses that combine both social media presence and e-commerce accessibility experience the highest gains in visibility and conversion rates.

Demographic segmentation of the findings revealed differences in innovation adoption depending on the age of the business, industry type, and geographic location. Younger businesses (0–5 years old) were generally more agile and quicker to integrate new marketing technologies, whereas older businesses tended to be more conservative and slower in their digital transition. The creative sector, including fashion, food and beverages, and digital services, showed the highest levels of innovation. In contrast, manufacturing businesses and those in traditional services showed lower adoption rates, mainly due to lack of exposure and training.

From a policy perspective, the study offers several implications. For MSME stakeholders, the results suggest the need to prioritize investment in human capital, especially in digital skills and marketing knowledge. For government institutions, this research underscores the urgency of providing structured digital marketing training programs, subsidized access to online platforms, and infrastructure support particularly in underdeveloped and rural areas. Strengthening public-private partnerships could also play a role in accelerating innovation diffusion among MSMEs.

Finally, the reliability of the research instrument was confirmed through validity and reliability testing using SPSS. The Cronbach's Alpha values for all constructs exceeded the threshold of 0.7, indicating internal consistency. Validity tests also showed strong item-total correlations, ensuring that the questions were accurately measuring the intended variables. Nonetheless, this study acknowledges limitations such as its focus on select regions and reliance on self-reported data, which may introduce subjectivity. Future research could benefit from a mixed-methods approach or longitudinal studies to capture dynamic changes in marketing behavior over time.

Adoption Level of Marketing Innovation

The research indicates that the level of adoption of marketing innovation among MSMEs has increased significantly over the past few years. This trend aligns closely with the acceleration of digital transformation brought about by Industry 4.0. Most MSMEs have shifted from traditional marketing methods such as banners, brochures, and word-of-mouth promotions to more modern, data-driven strategies that involve social media, email marketing, influencer collaboration, and SEO/SEM tools. Platforms like Instagram and TikTok were found to be particularly influential in targeting millennial and Gen Z consumers through visual and short-form content. Additionally, the adoption of WhatsApp Business and automated response tools further enhanced customer communication. These innovations not only offer wider reach and flexibility but also allow real-time engagement and performance tracking, which were previously unavailable through conventional marketing.

The Relationship Between Marketing Innovation and Business Performance

Using SPSS regression analysis, the study found that marketing innovation has a statistically significant positive impact on business performance indicators such as revenue growth, customer retention, and market competitiveness. MSMEs that implemented innovations such as content personalization, automated marketing, customer relationship management (CRM) tools, and user-generated content campaigns experienced consistent growth in monthly sales and online traffic. Furthermore, businesses that integrated cross-platform strategies (e.g., combining Instagram ads with Shopee live streaming) saw exponential improvements in brand visibility and lead conversion. This highlights the importance of a multi-channel, technology-driven approach to marketing in the modern economy, especially for small businesses seeking to scale without large capital investments.

Contribution to Economic Growth

The study also identified broader economic contributions of marketing innovation. Business owners shared that with increased sales and online engagement, they were able to invest in hiring new staff, improving operational systems, and expanding their product lines. In turn, this fostered job creation and increased demand for supporting services such as local logistics, digital content creators, and freelance marketers. In regions with high MSME activity, the adoption of smart marketing practices contributed to the vibrancy of local economies by encouraging entrepreneurship, consumer spending, and supplier development. This microeconomic progress aligns with national economic growth goals, especially in emerging economies like Indonesia, where MSMEs constitute the backbone of employment and GDP contribution.

Barriers to Implementation

Despite the benefits, several critical barriers hinder the effective implementation of marketing innovation. Internally, many MSMEs lack the human resources and knowledge to operate digital marketing tools effectively. Some business owners rely solely on family members or untrained staff, which limits the depth and consistency of marketing campaigns. There is also a cultural barrier especially among older business owners who are hesitant or distrustful of online platforms. Externally, technological limitations remain a concern. In rural areas, poor internet access and limited availability of training programs make it difficult to keep pace with innovation. Additionally, the financial burden of subscribing to professional marketing software or hiring digital talent can be prohibitive for micro-enterprises. These constraints reflect a wider issue of unequal digital development, necessitating structural interventions and policy support.

Strategic Role of Digital Platforms

Digital platforms have become the centerpiece of modern marketing strategies. MSMEs are leveraging Instagram for storytelling, TikTok for viral engagement, and YouTube for product demonstrations and reviews. Meanwhile, e-commerce platforms such as Shopee, Tokopedia, and Bukalapak are enabling businesses to integrate marketing with direct sales. These platforms offer built-in promotional features, analytics, and customer targeting tools that significantly reduce the cost and complexity of reaching new markets. Businesses that use platform-native tools such as TikTok Ads Manager or Shopee Live are gaining competitive advantages in attracting and retaining customers. Furthermore, real-time data from these platforms empowers MSMEs to make evidence-based decisions about pricing, promotion timing, and inventory planning.

Differences in Adoption Based on Business Characteristics

The degree to which businesses adopt marketing innovations depends on various internal characteristics. Startups and businesses under five years old tend to be more open to experimentation and digital tools, often founded by tech-savvy entrepreneurs. Older, family-owned businesses often face inertia and remain reliant on offline sales models. Sectoral analysis also revealed that businesses in the food and beverage, fashion, and creative industries adopt innovation more readily due to the visual appeal and social nature of their products. In contrast, businesses in traditional manufacturing, agriculture, or services like printing and repairs are slower to digitize, often due to perceived irrelevance or lack of awareness. These patterns emphasize the need for tailored outreach and education programs to different business categories.

Practical Implications for Business and Policy

The study offers practical implications for both MSME practitioners and policymakers. For businesses, it is clear that continuous learning and adaptation are vital to staying competitive. Investing in staff training, content creation, and basic digital tools can yield high returns. For the government, results suggest the importance of expanding digital training programs, offering marketing grants or tax incentives for MSMEs, and improving digital infrastructure across regions. Collaboration with tech companies, NGOs, and universities could help create accessible innovation hubs that provide consultation and tools to small business owners. In the long run, these efforts can help create a digitally resilient MSME sector capable of thriving in a volatile global market.

Reliability and Validity of Research Instruments

To ensure the accuracy and consistency of the data, the research employed reliability and validity testing using SPSS. The questionnaire's Cronbach's Alpha scores ranged from 0.78 to 0.89 across variables, indicating high internal consistency. Validity was also confirmed through item-total correlations and factor analysis, demonstrating that the questions accurately measured constructs such as innovation level, marketing performance, and perceived barriers. These results enhance the credibility of the research findings and support their use in future academic or policy-related applications.

Research Limitations

This study acknowledges several limitations. First, the sample size and geographic coverage were limited to certain provinces, which may not represent the diversity of MSME experiences across the country. Second, the use of a cross-sectional survey restricts the ability to capture long-term effects of marketing innovation. Third, as responses were self-reported, there may be subjectivity or overestimation of success. Future studies are encouraged to use longitudinal or experimental designs and include more diverse samples from different sectors and regions. Including qualitative interviews or case studies may also enrich understanding of how innovation is implemented on the ground.

CONCLUSIONS

This study concludes that marketing innovation plays a vital and transformative role in enhancing business performance and contributing to broader economic growth, particularly in the context of Industry 4.0. The adoption of digital marketing tools such as social media, e-commerce platforms, and personalized content strategies has empowered MSMEs to reach wider audiences, improve customer engagement, and increase their competitiveness in both local and global markets. The statistical analysis confirms a significant positive correlation between marketing innovation and key performance indicators, including sales growth, market expansion, and customer loyalty. However, the study also highlights several barriers, including limited digital literacy, infrastructure constraints, and financial limitations that hinder wider adoption. These findings underscore the urgent need for targeted support from policymakers, including digital training, infrastructure development, and innovation incentives. Ultimately, fostering a culture of continuous innovation in marketing is essential for building resilient, inclusive, and sustainable economic development in the digital age.

REFERENCE

Alkhazaleh, R., Mykoniatis, K., & Alahmer, A. (2022). The success of technology transfer in the industry 4.0 era: A systematic literature review. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(4), 202.

Anshari, M., & Almunawar, M. N. (2022). Adopting open innovation for SMEs and industrial revolution 4.0. *Journal of Science and Technology Policy Management*, *13*(2), 405-427.

Arumugam, S. K., Vittala, K. P., Gaikwad, S. M., & Tyagi, A. K. (2024). Role of Emerging Technologies in Smart Marketing and Smart Business for Modern Society. *Enhancing Medical Imaging with Emerging Technologies*, 330-346.

Choi, L. K., Panjaitan, A. S., & Apriliasari, D. (2022). The effectiveness of business intelligence management implementation in industry 4.0. *Startupreneur Business Digital (SABDA Journal)*, *1*(2), 115-125.

Diaz, E., Esteban, Á., Carranza Vallejo, R., & Martín-Consuegra Navarro, D. (2022). Digital tools and smart technologies in marketing: a thematic evolution. *International Marketing Review*, *39*(5), 1122-1150.

Hutsaliuk, O., Tsaturian, R., Kalinin, O., Gedz, M., Buhaieva, M., Kramskyi, S., & Navolokina, A. (2024). Technological synergy of engineering integrating in digitalization economy, nanotechnology and intelligent digital marketing for corporate enterprises in provisions of their economic security.

Jaiwant, S. V. (2023). The changing role of marketing: Industry 5.0-the game changer. In *Transformation for Sustainable Business and Management Practices: Exploring the Spectrum of Industry 5.0* (pp. 187-202). Emerald Publishing Limited.

Javaid, M., Haleem, A., Singh, R. P., & Sinha, A. K. (2024). Digital economy to improve the culture of industry 4.0: A study on features, implementation and challenges. *Green Technologies and Sustainability*, 100083.

Kalenyuk, I., Riashchenko, V., & Uninets, I. (2024). Smart marketing and global logistics networks. *Baltic Journal of Economic Studies*, *10*(2), 113-122.

Kaur, R., Singh, R., Gehlot, A., Priyadarshi, N., & Twala, B. (2022). Marketing strategies 4.0: recent trends and technologies in marketing. *Sustainability*, *14*(24), 16356.

Min, H. (2022). Developing a smart port architecture and essential elements in the era of Industry 4.0. *Maritime Economics & Logistics*, *24*(2), 189.

Mukhopadhyay, S., Singh, R. K., & Jain, T. (2024). Developing artificial intelligence enabled Marketing 4.0 framework: an Industry 4.0 perspective. *Qualitative Market Research: An International Journal*, *27*(5), 841-865.

Oklander, M., Yashkina, O., Petryshchenko, N., Karandin, O., & Yevdokimova, O. (2024). Economic aspects of Industry 4.0 marketing technologies implementation in the agricultural sector of Ukraine. *Ekonomika APK*, *31*(4), 55-66.

Rakib, M., Taan, H., Sudjiman, L. S., Sudjiman, P. E., Nurmahdi, A., & Santoso, R. (2023). Marketing Management Strategy In The Digital Era. *Penerbit Tahta Media*.

Satoła, Ł., & Milewska, A. (2022). The concept of a smart village as an innovative way of implementing public tasks in the era of instability on the energy market—Examples from Poland. *Energies*, *15*(14), 5175.

Sugiharto, B., Harkim, H., Hiya, N., & Marwan, A. (2024). Strengthening smart digital marketing for millennials and economic growth in Indonesia. *Journal of Management Science (JMAS)*, *7*(3), 464-469.

Ungerman, O., & Dědková, J. (2019). Marketing innovations in Industry 4.0 and their impacts on current enterprises. *Applied Sciences*, *9*(18), 3685.

Wereda, W., & Woźniak, J. (2019). Building relationships with customer 4.0 in the era of marketing 4.0: the case study of innovative enterprises in Poland. *Social Sciences*, *8*(6), 177.
Witkowski, K. (2017). Internet of things, big data, industry 4.0–innovative solutions in logistics and supply chains management. *Procedia engineering*, *182*, 763-769.
Zeqiri, A., Ben Youssef, A., & Maherzi Zahar, T. (2025). The Role of Digital Tourism Platforms in Advancing Sustainable Development Goals in the Industry 4.0 Era. *Sustainability*, *17*(8), 3482.