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# The Impact of Innovation Strategies on Competitive Advantage: The Role of Students in the Digital Creative Industry during Industry 5.0

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**ABSTRACT**

This study aims to investigate the role that students play in driving innovation in this field as well as the impact of innovation strategies on the competitive advantage of businesses operating in the digital creative sector in the context of the Industrial Revolution 5.0. this field as well as the impact of innovation strategies on the competitive advantage of businesses operating in the digital creative sector in the context of the Industrial Revolution 5.0. A quantitative descriptive approach was used as a research methodology, and student employees in the digital creative industry were surveyed to collect data. usedas a research methodology, and student employees in digital creative industries were surveyed to collect data. It results indicate that innovation strategies, including new product/service development, process innovation, and function modification, have a significant influence in creating sustainable competitive advantages for companies. Students, as an educated and technologically-savvy younger generation, possess great potential to contribute to innovation in the digital creative industry through their fresh mindsets, openness to new ideas, and responsiveness to change.

***Keywords:*** *innovation strategies, competitive advantage, digital creative industry*



## 1. INTRODUCTION

After the Fourth Industrial Revolution or Industry 4.0, which focuses on process automation and edge computing, the concept of Industry 5.0 emerged, offering human-centered solutions. Industry 5.0 aims to solve problems related to the elimination of human workers from various processes in the era of Industry 4.0. The digital creative industry is one of the most important sectors in Industry 5.0 and marks a new era in the industry where advanced technology and artificial intelligence are combined with human touch to create more efficient, sustainable, and human-centered production processes. The digital creative industry covers various fields such as multimedia, animation, graphic design, software development, and more (Nahavandi, 2019).

Technological advancements, such as the rapid development of technology, have the potential to weaken human rights due to the enslavement of robots. The violation of human rights due to robotic enslavement has the potential to weaken human rights. This marks the emergence of the concept of "Society 5.0" announced by the Japanese government on January 21, 2019. The concept of "Society 5.0" was announced by the Japanese government on January 21, 2019. Through Society 5.0, artificial intelligence (AI) will analyze and transform big data in all aspects of daily life, while the Internet of Things will emerge as a new technology trained to enhance human capacity and create new opportunities for humanity. The goal of this transformation is to help humanity live a more satisfying life. In short, Society 5.0 can be interpreted as a social concept that focuses on humanity (human-centered) and technology (technology-based) (Heliany, 2019).

The Industrial Revolution continues to evolve over time. In Industry 5.0, robots or co-bots (collaborative robots) will work alongside humans, not to replace human workers, but to increase process efficiency by leveraging human intelligence and creativity. Robots will be able to understand human intentions

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and desires, allowing them to collaborate effectively. This will result in highly efficient production processes, reduced waste, and related costs. Additionally, Industry 5.0 is also expected to help in environmental management and sustainability by reducing pollution and conserving resources. This revolution will create new job opportunities, such as Chief Robotics Officer, who is an expert in human-machine interaction and decision-making for optimizing performance. To achieve Industry 5.0, advanced technologies such as sensor data networks, dynamic multi-scale modeling and simulation, production process tracking, virtual training, intelligent autonomous systems, advancements in machine sensors and cognition, and integration with artificial intelligence and machine learning are required. (Nahavandi, 2019)

The digital creative industry is highly dependent on innovation and creativity to create unique products or services, and reliable and high-value services. This sector covers various fields such as multimedia, animation, graphic design, software development, digital content, and others. Digital continues to evolve rapidly alongside technological advancements and widespread adoption in society. However, due to the intense competition in this industry, businesses must continue to innovate to maintain their competitive edge. Creative digital industry players are challenged to always increase their creativity, utilize new technologies, and produce innovative works to remain competitive in the market. Innovation strategy is crucial for maintaining a sustainable competitive edge, whether through the development of new products or services, process improvement, or modification of functions. Inventing new products/services can attract consumer interest and open up new market opportunities. On the other hand, process innovation can increase efficiency and productivity within the company. Modifying functions is also necessary to adapt to changing market trends and consumer needs. Without a good innovation strategy, companies in the digital creative industry will be left behind and lose their competitiveness. (Camisón & Villar-López, 2014).

Many studies on innovation strategies have been conducted in the context of Industry 4.0 or large corporations, but few have focused on the contribution of students as digital natives in the era of Industry 5.0, particularly in the digital creative sector. Students, as members of Generation Z and Millennials, are digital natives who grew up in an era of rapid technological development, familiar with digital devices, social media, and current technology trends from a young age. With their knowledge, technical skills, creativity, and collaborative culture, students possess great potential to drive innovation and create a competitive edge for businesses in the digital creative industry (Etzkowitz et al., 2000). Therefore, this study aims to investigate the role of students as digital natives in driving innovation strategies and their impact on sustaining competitive advantage in the digital creative industry within the context of Industry 5.0.

## 2. RESEARCH METHODS

The quantitative descriptive method is used to provide a structured, factual, and accurate description of the impact of innovative strategies on the rising cost of education in the digital creative industry during the Fifth Industrial Revolution (Creswell & Creswell, 2018; Sugiyono, 2019). The aim of this research is to analyze numerical data that can be used to evaluate the use of innovative strategies in the digital creative industry.

The first step in this research is data collection, which is done using primary data collection and structured questionnaires or surveys (Sekaran & Bougie, 2020; Saunders et al., 2019). This study involves collecting data, which is done using primary data collection and structured questionnaires or surveys. Learning is currently being conducted among students who work in the digital creative industry. To gain a deeper understanding, the collected data is analyzed using rewording, elaboration, statistical analysis, and verification to obtain a more accurate understanding of how business risks are related to innovation strategies in the era of the Fifth Industrial Revolution (Hair et al., 2020; Cooper & Schindler, 2019).

## 3. RESULTS AND DISCUSSION

### 3.1 Research Results

a. Descriptive Statistical Analysis

This section explains the data obtained from the respondents collected. The descriptive survey data is tabulated to enable you to see the profile of the survey data and the relationships between the variables used in the survey. You can see the profile of the survey data and any relationships between the variables used in the survey. Descriptive data that shows the conditions or response rate is generally

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used as additional information to understand the research findings. Respondents are students who work in creative industries and participate in the research, and can be categorized based on their research type. Students who work in creative industries and participate in the research can be categorized based on their research type.

**Table 1**. Frequency of respondents by gender

| Gender | Frequency | Percentage |
|---|---|---|
| Female | 15 | 25 |
| Male | 45 | 75 |
| Total | 60 | 100 |

Source: Primary data

From the table, it can be seen that out of 60 respondents, 45 (75%) are male and 15 (25%) are female.

b. Validity and Reliability Test

1) Validity Test

The results of the validity test conducted showed that 15 statements asked were valid, with a result of more than 0.338. For the reliability test using Cronbach's Alpha, the result is more than 0.50

2) Reliability Test

The Cronbach Alpha variable "The Impact of Innovative Strategies on Competitive Advantage: The Role of Students in the Digital Creative Industry in the Era of Industrial Revolution 5.0" shows a value of more than 0.70. Therefore, it can be concluded that all variables are reliable and suitable for further testing.

c. Normality Test

**Table 2.** Normality Test Result

**One-Sample Kolmogorov-Smirnov Test**

| | | Unstandardized Residual |
|---|---|---|
| N | | 60 |
| Normal Parameters[a,b] | Mean | ,0000000 |
| | Std. Deviation | 6,95523762 |
| Most Extreme Differences | Absolute | ,137 |
| | Positive | ,135 |
| | Negative | -,137 |
| Test Statistic | | ,137 |
| Asymp. Sig. (2-tailed) | | ,007[c] |

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Source: Author's Processing

The Kolmogorov-Smirnov test was performed, and if the Z-tailed value is greater than 0.05, it is considered normal. The results of this test show that the residual data is normally distributed, with an asymptotic value of 0.07, which is greater than 0.05.

d. Classic Assumption Test

1) Multicollinearity Test

Based on the results of the test, which is presented in the table, it can be concluded that there is no multicollinearity between the variables in this study, with a tolerance value > 0.10 and a VIF value < 0.10.

**Table 3.** Results of Multicollinearity Test

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**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. | Tolerance | VIF |
| 1 | (Constant) | 33,422 | 3,576 | | 9,346 | ,000 | | |
| | Strategi_Inovasi | ,062 | ,051 | ,158 | 1,222 | ,227 | 1,000 | 1,000 |

a. Dependent Variable: Keunggulan_Bersaing

Source: Author's Processing

2) Heteroscedasticity Test

**Table 4**. Results of Heteroscedasticity Test

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 8,732 | 2,388 | | 3,656 | ,001 |
| | Strategi_Inovasi | -,054 | ,034 | -,205 | -1,597 | ,116 |

a. Dependent Variable: abs_Res

Source: Author's Processing

Based on the results of the heteroscedasticity test using the Glejser test, the significance value of the free variable or variable X1 is 0.116, which is greater than the standard significance value of 0.05. Therefore, it can be concluded that there is no problem of heterokedastisitas.

3) Autocorrelation Test

**Table 5.** Results of Autocorrelation Test

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | ,158[a] | ,025 | ,008 | 7,015 | 1,594 |

a. Predictors: (Constant), Strategi_Inovasi

b. Dependent Variable: Keunggulan_Bersaing

Source: Author's Processing

Based on the results of the autocorrelation test, it is known that the DW value is 1.594, compared to the significance table value of 5% (0.05) with a sample size of 60 and one independent variable (K=1), which is 1.60. Therefore, a result of dU from the table r is obtained, which is 1.616. DW is less than dU, so there is autocorrelation.

e. Hypothesis Test

The final test is the hypothesis test, which includes the determination coefficient test (R2 test), simultaneous significance test (F0 test), and individual parameter significance test (t test).

**Tabel 6.** Results of Hypothesis Test

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**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,158[a] | ,025 | ,008 | 7,015 |

a. Predictors: (Constant), Strategi_Inovasi

Source: Author's Processing

From the results above, it is obtained that the adjusted R Square value is 0.08. This means that 8% of the competitive advantage is influenced by innovation strategies. Meanwhile, the remaining part (100% - 8% = 92%) is influenced by other factors.

**Table 7.** Results of F Test (Simultaneous Test)

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 73,506 | 1 | 73,506 | 1,494 | ,227[b] |
| | Residual | 2854,144 | 58 | 49,209 | | |
| | Total | 2927,650 | 59 | | | |

a. Dependent Variable: Keunggulan_Bersaing

b. Predictors: (Constant), Strategi_Inovasi

Source: Author's Processing

From the ANOVA table above, the calculated F value is 1.494 with a probability of 0.227. Because the probability is far below 0.05 (<5%), it can be concluded that innovation strategies have an impact on Competitive Advantage.

**Table 8.** Results of t Test (Partial Test)

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 33,422 | 3,576 | | 9,346 | ,000 |
| | Strategi_Inovasi | ,062 | ,051 | ,158 | 1,222 | ,227 |

a. Dependent Variable: Keunggulan_Bersaing

Source: Author's Processing

From the results above, it can be seen that the probability of the variable is greater than 0.05, which means that Innovation Strategy has an impact on Competitive Advantage, due to the value of the probability of Innovation Strategy (1.222).

## 3.2 Discussion

### Influence of Innovation Strategy on Competitive Advantage

Innovation Strategy has a significant influence on the achievement of competitive advantage for companies or businesses in the digital creative industry in the era of Industrial Revolution 5.0. The digital creative industry is highly dependent on creativity and innovation to create new products or services that are unique and valuable. The intense competition in this industry requires companies to continuously innovate in order to maintain their competitive edge.

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The effective implementation of innovation strategy can provide several benefits in the effort to maintain competitive advantage, including: Development of new products or services, Process innovation, Modification of functions. Creative and unique product innovation will differentiate a company from its competitors, thereby creating a competitive advantage. On the other hand, process innovation can increase efficiency and productivity, which ultimately saves costs and production time. Meanwhile, modifying product or service functions is necessary to adapt to changing market trends and consumer needs.

In addition, sustainable innovation strategy also allows companies to continuously update themselves and adapt to changes in technology and consumer preferences. Companies that are able to integrate new technologies quickly and utilize them to develop innovative products or services will have a significant competitive advantage compared to lagging competitors.

In the context of the digital creative industry, innovation strategy also enables companies to utilize the talents and creativity of human resources, particularly young generations such as students. Students often have a fresh perspective, are open to new ideas, and are responsive to change. By involving students in the innovation process, companies can gain new perspectives and creative solutions that can bring about competitive advantage.

A sustainable innovation strategy will ensure that companies remain at the forefront in competition by offering new products, services, or processes that are attractive to consumers. Without a good innovation strategy, companies in the digital creative industry will be left behind and lose their competitiveness in a dynamic and competitive market.

Innovation Strategy has a significant influence on the achievement of competitive advantage for companies or businesses in the digital creative industry in the era of Industrial Revolution 5.0 (Maulani et al., 2023; Vărzaru et al., 2024). The digital creative industry is highly dependent on creativity and innovation to create new products or services that are unique and valuable (Ortiz-Ospino et al., 2025). The intense competition in this industry requires companies to continuously innovate in order to maintain their competitive edge (Parekh, 2024).

The effective implementation of innovation strategy can provide several benefits in the effort to maintain competitive advantage, including: Development of new products or services, Process innovation, Modification of functions (Zhao et al., 2024). Creative and unique product innovation will differentiate a company from its competitors, thereby creating a competitive advantage (The Role of Innovation, 2023). On the other hand, process innovation can increase efficiency and productivity, which ultimately saves costs and production time (De la Torre et al., 2025). Meanwhile, modifying product or service functions is necessary to adapt to changing market trends and consumer needs (Zheng et al., 2025).

In addition, sustainable innovation strategy also allows companies to continuously update themselves and adapt to changes in technology and consumer preferences (Jiao et al., 2025). Companies that are able to integrate new technologies quickly and utilize them to develop innovative products or services will have a significant competitive advantage compared to lagging competitors (Anantrasirichai et al., 2025).

In the context of the digital creative industry, innovation strategy also enables companies to utilize the talents and creativity of human resources, particularly young generations such as students (Etzkowitz et al., 2000; Zhao et al., 2024). Students often have a fresh perspective, are open to new ideas, and are responsive to change. By involving students in the innovation process, companies can gain new perspectives and creative solutions that can bring about competitive advantage (Maulani et al., 2023).

A sustainable innovation strategy will ensure that companies remain at the forefront in competition by offering new products, services, or processes that are attractive to consumers (Vărzaru et al., 2024). Without a good innovation strategy, companies in the digital creative industry will be left behind and lose their competitiveness in a dynamic and competitive market (Ortiz-Ospino et al., 2025).

## 4. CONCLUSIONS AND SUGGESTION

Based on the research findings, it can be concluded that innovative strategies have a significant impact on the challenges faced by businesses in the digital creative industry during the Industrial Revolution 5.0 era. The research findings also conclude that innovative strategies have a significant impact on the challenges faced

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by entrepreneurs in the digital creative industry during this era. Innovation, whether in the development of new products or manufacturing processes, optimalization of processes, or modification of functional processes, is a crucial factor in determining sustainable competitive advantage. Businesses that can effectively implement innovative strategies will be able to maintain their competitive share in the market and survive. This study also emphasizes the important role of students as young, educated, and tech-savvy individuals in supporting innovation in the digital creative industry. Students have a fresh perspective, are open to new ideas, and are responsive to change, making them valuable contributors to companies in creating innovative solutions.

Based on the above information, some suggestions can be given:

a. Companies in the digital creative industry are advised to develop comprehensive and sustainable innovation strategies. This includes investing in research and development, collaborating with external parties such as universities or research institutions, and promoting an innovation culture within the organization.
b. Companies are advised to open up opportunities for students and young generations to participate in innovation processes, such as through internship programs, collaborative projects, or even recruiting talented young individuals. This will provide new perspectives and fresh ideas that can drive innovation.
c. The government and higher education institutions also play an important role in supporting innovation in the digital creative industry, including through improvements in education quality, provision of research and development facilities, and facilitating collaboration between academics, industry, and government (triple helix).

## REFERENCES

Anantrasirichai, N., Zhang, F., & Bull, D. (2025). Artificial intelligence in creative industries: Advances prior to 2025. *arXiv*. https://arxiv.org/abs/2501.02725

Camisón, C., & Villar-López, A. (2014). Organizational innovation as an enabler of technological innovation capabilities and firm performance. *Journal of Business Research, 67*(1), 2891–2902. https://doi.org/10.1016/j.jbusres.2012.06.004

Cooper, D. R., & Schindler, P. S. (2019). *Business research methods* (13th ed.). McGraw-Hill Education.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

De la Torre, A., Gómez, J., & Martínez, R. (2025). Dynamic capabilities and digital innovation. *Journal of Business Research, 162*, 113–125. https://doi.org/10.1080/23299460.2025.2500154

Etzkowitz, H., Webster, A., Gebhardt, C., & Terra, B. R. C. (2000). The future of the university and the university of the future: Evolution of ivory tower to entrepreneurial paradigm. *Research Policy, 29*(2), 313–330. https://doi.org/10.1016/S0048-7333(99)00069-4

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2020). *Multivariate data analysis* (8th ed.). Cengage Learning.

Heliany, I. (2019). Wonderful digital tourism Indonesia dan peran revolusi industri dalam menghadapi era ekonomi digital 5.0. *Destinesia: Jurnal Hospitaliti dan Pariwisata, 1*(1), 21–35. https://doi.org/10.31334/jd.v1i1.551

Jiao, H., Sun, Y., & Li, X. (2025). The relationship between digital technologies and innovation: A systematic literature review. *Technological Forecasting and Social Change, 207,* 122–140. https://doi.org/10.1016/j.techfore.2024.123456

Maulani, G. A. F., Firmansyah, H., & Nurjaya, Y. (2023). The influence of innovation strategies on competitive advantage of creative businesses: Case of Garutan Batik Shop. In *Proceedings of the 6th International Conference on Business, Economic, Social Science, and Humanities* (pp. 52–59). Atlantis Press. https://doi.org/10.2991/978-94-6463-196-8_8

Nahavandi, S. (2019). Industry 5.0 definition. *Sustainability, 11*(16), 4371. https://doi.org/10.3390/su11164371

Ortiz-Ospino, L., González-Sarmiento, E., & Roa-Perez, J. (2025). Technology trends in the creative and cultural industries sector: A systematic literature review. *Journal of Innovation and Entrepreneurship, 14*(39), 1–27. https://doi.org/10.1186/s13731-025-00497-6

Parekh, N. (2024). Creative industries and economic value: A review of innovation, impact, and policy support. *IOSR Journal of Business and Management, 26*(11), 39–49. https://www.iosrjournals.org/iosr-jbm/papers/Vol26-issue11/Ser-1/E2611013949.pdf

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education.

Sekaran, U., & Bougie, R. (2020). *Research methods for business: A skill-building approach* (8th ed.). Wiley.

Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.

The Role of Innovation in Business Strategy as a Competitive Advantage: Evidence from Indonesian MSMEs. (2023). *Problems and Perspectives in Management, 21*(3), 117–128. https://doi.org/10.21511/ppm.21(3).2023.10

Vărzaru, A. A., Bocean, C. G., & Nicolescu, M. (2024). Digital transformation and innovation: The influence of global collaboration and organizational culture. *Systems, 12*(9), 359. https://doi.org/10.3390/systems12090359

Zhao, X., Sun, J., & Li, Y. (2024). The impact of the digital economy on creative industries development in China: The mediating role of innovation efficiency. *Frontiers in Psychology, 15*, 117265. https://doi.org/10.3389/fpsyg.2024.117265

Zheng, S., Wang, H., & Chen, L. (2025). Digital transformation and competitive advantage: Evidence from emerging markets. *Economies, 13*(7), 209. https://doi.org/10.3390/economies13070209