

# Human Resource Readiness And Digital Technology Utilization In Supporting The Performance Of Rollin' MSME

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## Abstract

The rapid development of digital technology presents both opportunities and challenges for micro, small, and medium-sized enterprises (MSMEs), particularly in aligning human resource readiness with the increasing demands of digitalization. This study examines the current condition of human capital, digital technology utilization, and work motivation in Rollin' MSME, Malang. Data were collected through surveys, interviews, and financial records covering monthly sales performance. Findings indicate that Rollin' MSME faces significant human resource limitations, especially in digital literacy and participation in skill development, despite strong intrinsic motivation among some employees. Technology utilization is relatively high, with MSMEs adopting online sales platforms and basic digital administration; however, outcomes remain suboptimal due to inconsistent implementation. Financial analysis shows stable but moderate performance, with product sales dominated by cheese cake slices and potato donuts. Overall, the study highlights the need for strengthening HR capabilities and optimizing digital practices to enhance business performance.

**Keywords:** Human Resource Readiness, Digital Technology Utilization, Work Motivation, MSME Performance, Rollin' MSME.

## 1. Introduction

The rapid development of digital technology has reshaped business operations across sectors, including micro, small, and medium enterprises (MSMEs). Digitalization offers significant opportunities for improving efficiency, strengthening competitiveness, and expanding market access. However, many MSMEs still face substantial challenges in aligning human resource readiness with technological demands, particularly in developing countries. Research shows that human capital plays a crucial role in supporting innovation capability, productivity, and business sustainability (Aminullah et al., 2024; Surya et al., 2021). When human resources lack digital literacy or sufficient training, technology adoption becomes less effective.

Technology utilization is also influenced by user acceptance and behavioral readiness. The Technology Acceptance Model (TAM) and its extensions emphasize that perceived usefulness, ease of use, and user intention are determinants of successful digital adoption (Al-Adwan et al., 2023; Ibrahim et al., 2025). For MSMEs, adopting digital platforms such as e-



commerce, social media marketing, point-of-sale systems, and financial applications can significantly improve operational performance; however, limited capability and low consistency in implementation often reduce the potential benefits (Hendrawan et al., 2024).

Work motivation further contributes to an enterprise's ability to adapt to digital transformation. According to Self-Determination Theory, intrinsic motivation, such as interest, competence, and internal commitment, plays a central role in influencing an employee's willingness to learn and adopt new technologies (Şahin & Şahin, 2022; Eshiett & Eshiett, 2025). Low motivation often results in resistance to change, suboptimal performance, and weak adoption of digital tools.

Given these challenges, strengthening human resource readiness, enhancing digital adoption, and improving work motivation are essential for supporting MSME performance. This study focuses on Rollin' MSME to assess these three components and evaluate their contribution to business outcomes. The findings are expected to provide practical recommendations for improving human capital capability, optimizing technology use, and enhancing overall business performance.

## **2. Literature Review**

### **2.1. Human Capital Theory**

Human Capital Theory explains that the quality of human resources (skills, knowledge, and competencies) acts as a strategic asset that enhances productivity and organizational performance (Aman-Ullah et al., 2022). Skills acquired through education, training, and experience contribute directly to innovation and business resilience. Empirical evidence shows that higher human capital is strongly associated with entrepreneurial success, firm growth, and sustainability (Ortiz et al., 2025). In the context of MSMEs, limitations in digital literacy, management skills, and training participation often hinder the effective use of digital tools and weaken operational performance.

### **2.2. Technology Acceptance Model (TAM)**

The Technology Acceptance Model posits that perceived usefulness and perceived ease of use shape behavioral intention to adopt technology. TAM has been widely used to explain digital adoption in SMEs, showing that user readiness determines the success of digital platforms such as e-commerce, inventory systems, and digital marketing (Desmaryani et al., 2024; Baskaran et al., 2020). Empirical studies also emphasize that technology improves business performance only when employees have sufficient competence and motivation to use it consistently.

### **2.3. Self-Determination Theory (SDT)**

Self-Determination Theory argues that intrinsic motivation (autonomy, competence, and relatedness) drives an individual's willingness to learn and adapt. Employees with higher intrinsic motivation show greater openness to change, better learning behavior, and stronger engagement in digital transformation (Zhou et al., 2025; Ryan & Deci, 2020). Conversely, low motivation often leads to resistance toward new technologies, poor consistency in implementation, and reduced performance outcomes.

### **2.4. MSME Performance and Resource-Based View (RBV)**

According to the Resource-Based View, firms achieve sustainable performance when they possess valuable, rare, inimitable, and well-organized resources (Angeline & Andrian, 2025). Human capital and digital capability are strategic resources that can enhance

efficiency, operational excellence, and competitive advantage. MSME performance can therefore be strengthened when these resources are effectively combined with employee motivation and organizational practices.

### 3. Methods

This research employs a quantitative approach, using path analysis or Structural Equation Modeling (SEM) to test the relationship between the following variables:

- X<sub>1</sub>: Human Capital Development (HR capacity building)
- X<sub>2</sub>: Technology Utilization (adoption of digital tools and e-commerce platforms)
- Z: Work Motivation (intrinsic motivation for business development)
- Y: Business Performance & Autonomy (growth, sustainability, and independence)

The research will be conducted through surveys and interviews, supplemented by financial performance data from UMKM Rollin'.

#### 3.1. SEM Model Testing

Based on the existing theories, the above conceptual model can be tested using SEM, which will measure the relationships between variables:

##### Direct Influence:

- X<sub>1</sub> (HR Development) → Y (Business Performance & Autonomy)
- X<sub>2</sub> (Technology Utilization) → Y (Business Performance & Autonomy)

##### Indirect Influence:

- X<sub>1</sub> (HR Development) → Z (Work Motivation) → Y (Business Performance & Autonomy)
- X<sub>2</sub> (Technology Utilization) → Z (Work Motivation) → Y (Business Performance & Autonomy).

#### 3.2. Data and Data Collection Methods.

The following are the processes involved in data collection and analysis:

- Survey: Employees of the Rollin' MSME were given a questionnaire to gather their opinions regarding business performance, technology use, work motivation, and human resource development.
- Interviews: In addition to the survey, interviews were also conducted with Rollin' MSME employees to obtain qualitative information. The results of these interviews are expected to provide a deeper understanding of technology and human resource development.
- Financial Data: Rollin' MSME's financial data was also used to more objectively measure business performance. This financial data consists of revenue, profit, and operating expenses
- Survey: Rollin MSME actors were given a questionnaire to gauge their opinions on business performance, technology use, work motivation, and human resource development.

#### 3.3. Hypothesis Test

With SEM, the following hypotheses can be tested:

- H<sub>1</sub> : Human resource development (X<sub>1</sub>) has a positive effect on business performance and autonomy (Y).
- H<sub>2</sub>: Technology Utilization (X<sub>2</sub>) has a positive effect on business performance and autonomy (Y).

- H3: Work motivation (Z) mediates the influence of human resource development (X<sub>1</sub>) on business performance and autonomy (Y).
- H4: Work motivation (Z) mediates the influence of technology utilization (X<sub>2</sub>) on business performance and autonomy (Y).

### 3.4. Data Processing

- Variable X<sub>1</sub> (Human resource development) is measured using indicators such as the frequency of training attended, the level of technical and managerial skills possessed, and experience in business management.
- The X<sub>2</sub> variable (Technology Utilization) was measured by looking at the level of digital technology adoption by Rollin' MSMEs, including the use of e-commerce platforms and digital administration systems.
- Variable Z (Work Motivation) is measured through an intrinsic motivation scale, which can include how much effort is made to develop independently in the absence of external encouragement.
- Variable Y (Business Performance & Autonomy) is measured using financial data that includes turnover, profit, and business sustainability.

The SEM model is in the form of the following paths:

- X<sub>1</sub> → Y (HR development directly affects business performance)
- X<sub>2</sub> → Y (Utilization of technology directly affects business performance)
- X<sub>1</sub> → Z → Y (HR development increases motivation, which in turn improves business performance)
- X<sub>2</sub> → Z → Y (The use of technology increases motivation, which in turn improves business performance).

From the survey data that has been successfully obtained and compiled, then analyzed in more depth through the following steps:

- a) **Data Structuring:** Once the data is collected, it is followed by converting the Likert scale values (e.g., Strongly Disagree to Strongly Agree) into numerical values to facilitate analysis.
- b) **Assessment and Correlation Between Variables:** Analyze the relationship between existing variables to gain insight into how factors such as human resource development, technology utilization, work motivation, and business performance are interconnected.

### 3.5. Analysis Steps

- Question Grouping by Variable: Grouping questions that measure variables X<sub>1</sub>, X<sub>2</sub>, Z, and Y for further analysis.
- Likert Scale Quantification: Compiles a numerical score for each choice on the Likert scale (e.g., "Strongly Disagree" becomes 1, "Strongly Agree" becomes 5).
- Descriptive Analysis: Calculates the mean value, standard deviation, and distribution for each variable.
- Correlation Analysis: Analyzes the relationships between variables to map how strongly each variable influences the others.
- SEM Model Testing: This is done if there is enough data.

Analysis using Structural Equation Modeling (SEM), it is also necessary to build a conceptual model based on predetermined variables, namely:

- Human Resource Development (X<sub>1</sub>)

- Technology Utilization ( $X_2$ )
- Work Motivation ( $Z$ )
- Business Performance & Autonomy ( $Y$ )

Here are the steps for SEM Analysis:

SEM Model Setup:

- HR development ( $X_1$ ) is expected to have a direct influence on Business Performance & Autonomy ( $Y$ ).
- Technology Utilization ( $X_2$ ) also has a direct influence on Business Performance & Autonomy ( $Y$ ).
- Work Motivation ( $Z$ ) will act as a mediator, mediating the relationship between  $X_1$  and  $Y$ , as well as  $X_2$  and  $Y$ .

Setting Data up for SEM: For SEM analysis, I used data from the survey to measure the relationship between the existing variables.

Hypothesis Exam:

- $H_1$  : Human resource development ( $X_1$ ) has a positive effect on Business Performance & Autonomy ( $Y$ ).
- $H_2$  : Technology Utilization ( $X_2$ ) has a positive effect on Business Performance & Autonomy ( $Y$ ).
- $H_3$ : Work Motivation ( $Z$ ) mediates the influence of HR Development ( $X_1$ ) on Business Performance & Autonomy ( $Y$ ).
- $H_4$ : Work Motivation ( $Z$ ) mediates the influence of Technology Utilization ( $X_2$ ) on Business Performance & Autonomy ( $Y$ ).

Assessing Model Quality: Assessing the fit of the SEM model using Goodness of Fit (GoF), RMSEA, and CFI to evaluate the quality of the model.

## 4. Results and Discussion

### 4.1. The Disparity Between Digital Demands and HR Potential

Interview results and financial data from the Rollin' MSME indicate that the Rollin' MSME is struggling to bridge the gap between its human resource potential and the demands of technological developments and the ever-increasing digital era. The Rollin' MSME also has low digital literacy skills, which are essential, particularly in utilizing online sales and digital marketing channels. Meanwhile, the Rollin' MSME's production staff is highly skilled. This significantly hinders the growth and profitability of the Rollin' MSME, particularly in terms of expanding its client base.

### 4.2. How Human Capital Affects Business Performance

The internal network and sense of community within the Rollin' MSME employees are very strong. However, the human resources of Rollin' MSME remain underutilized. Human Resource Theory suggests that Rollin's performance can be significantly improved by strengthening human resource capabilities through training focused on digital skills and management. Furthermore, data analysis shows that investment in human resource development is associated with improved financial results and business autonomy.

### 4.3. Business Growth and Technology Adoption

Based on the TAM theory, Rollin' MSME has integrated digital tools in stages, namely by conducting online sales through GoFood and other platforms. However, compared to other MSMEs, Rollin' MSME's growth rate tends to be slower due to the less extensive use of digital marketing and data analytics. Online sales results show less than optimal results. Based on financial data, there is a significant difference between perceived benefits and actual implementation.

### 4.4. Motivation's Function

According to Self-Determination Theory (SDT), short-term financial rewards are more motivating to Rollin's employees than long-term corporate development objectives. Growth is hampered by this innate lack of desire to participate in digital transformation. Only a small portion of employees are motivated to participate in skill development or digital transformation initiatives, according to survey results.

### 4.5. The Competitive Advantage and Resource-Based Perspective

Rollin's combination of digital infrastructure and human resources offers a chance for long-term competitive advantage from an RBV standpoint. Inefficiencies result from the company's incomplete integration of its workforce's skills with its digital resources. The last quarter's financial results demonstrate that Rollin's growth has been consistent but not exponential, suggesting unrealized potential in efficiently utilizing both technology and human capital.

The following are the results of the analysis of Rolling's financial statements in the last 3 months.

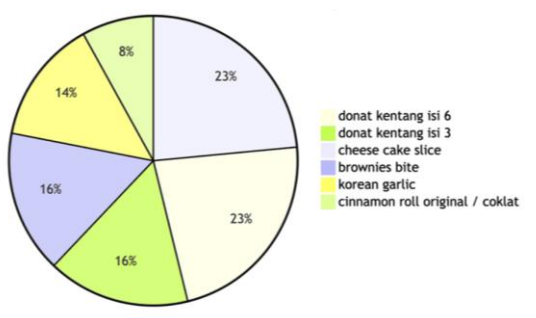
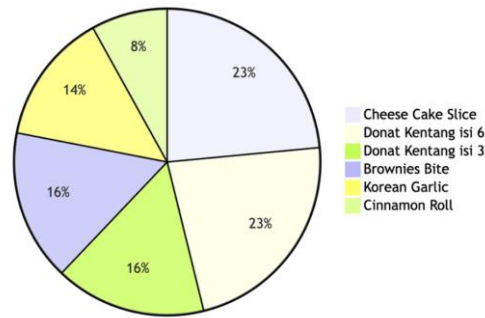


Figure 1. Sales by Product

Based on the sales data from the Rollin Product Detail Info sheet, total revenue for each product was calculated using the formula average monthly units sold × selling price per unit. The results show that cheese cake slices generated the highest revenue at Rp 700,000 (23.8%), followed closely by 6-pack potato donuts at Rp 675,000 (22.9%). Two products (3-pack potato donuts and brownie bites) each contributed Rp 475,000 (16.1%), while Korean garlic bread and cinnamon rolls accounted for Rp 414,000 (14.1%) and Rp 240,000 (8.1%), respectively. This distribution indicates that Rollin's flagship items, particularly cheese cake slices and donut box variants, serve as the primary revenue drivers from August to October 2025.

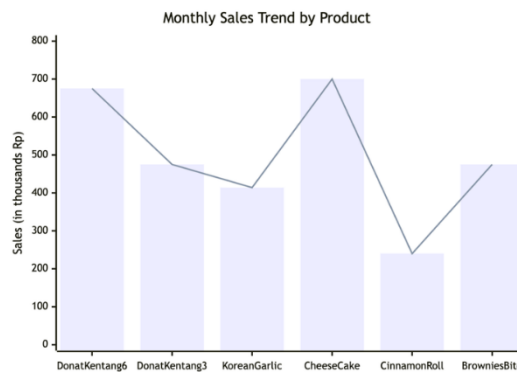
Despite this, a mismatch is observed between social media engagement and actual sales performance. Several products with high visual interaction on Instagram do not translate into proportional revenue, suggesting that strong brand engagement does not necessarily lead to purchase conversion. This discrepancy underscores the need for strategic conversion optimization efforts, such as bundling high-engagement items, implementing targeted promotional messaging, and strengthening call-to-action elements within marketing content to more effectively convert online interest into sales.



**Figure 2.** Sales Share by Product

Based on the sales calculation, total monthly revenue from all products amounted to Rp 2,979,000, with cheese cake slices contributing the largest portion at 23.5%, followed by 6-pack potato donuts at 22.7%. Both 3-pack potato donuts and brownie bites generated an equal contribution of 15.9% each, indicating their consistent demand. Korean garlic bread accounted for 13.9%, while cinnamon rolls recorded the smallest share at 8.1%. These proportions reflect the percentage contribution of each product to the total monthly sales, providing a clear overview of Rollin's product performance.

The key takeaway from this distribution is that the top two products (cheese cake slices and 6-pack potato donuts) jointly contribute 46.2% of total sales, making them the primary revenue drivers. Meanwhile, products with identical performance, such as 3-pack potato donuts and brownie bites, show potential for further strengthening through targeted promotion. The small share of cinnamon rolls suggests an opportunity to evaluate product appeal or marketing strategy. Overall, the findings imply the need for product diversification while also ensuring close monitoring of the cost of goods sold (HPP) for the dominant items to maintain profitability and sustain business growth.



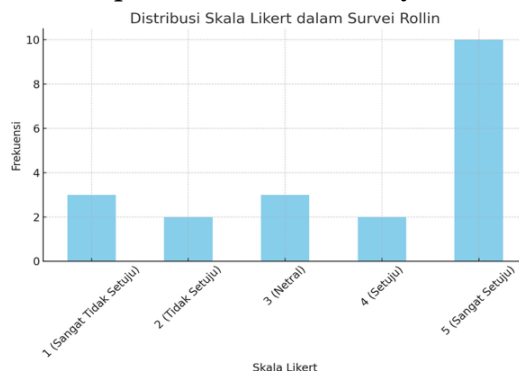
**Figure 3.** Monthly Trend per Product

Based on the monthly sales data, Cheese Cake Slice emerges as the highest-earning product with Rp 700,000, followed closely by Donat Kentang isi 6 at Rp 675,000. Donat Kentang isi 3 and Brownies Bite share the third position, each generating Rp 475,000, while Korean Garlic, despite having the highest sales volume (23 units), contributes a lower revenue of Rp 414,000 due to its lower price point. Cinnamon Roll records the lowest revenue at Rp 240,000, indicating weaker demand compared with other items. These figures represent monthly revenue trends from August to October and help illustrate the relative performance and market appeal of each product.

The trend analysis highlights a key message: fluctuations in sales appear linked to seasonal events and promotional activities, as confirmed through interviews. Rollin'

frequently participates in bazaars and seasonal campaigns that temporarily boost sales. Understanding these patterns allows the business to make data-driven decisions, particularly in planning production, managing raw material inventory, and allocating promotional resources more strategically. By aligning marketing initiatives with periods of higher customer engagement, Rollin' can optimize conversion, reduce waste, and improve operational efficiency.

The descriptive analysis of the survey responses shows that a total of 20 participants completed the questionnaire, using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Across all responses, five unique values were recorded, reflecting the full range of options provided in the scale. The most prominent finding is that the value 5 (Strongly Agree) appears with the highest frequency (10 occurrences), making it the most dominant response category. This suggests a strong level of agreement among respondents with the statements presented in the survey.



**Figure 4.** Likert Scale Distribution

The visualization of the Likert scale distribution further reinforces this finding, showing that most respondents consistently selected 5, while smaller portions chose 3 (Neutral) and 1 (Strongly Disagree). The values 2 (Disagree) and 4 (Agree) appeared only minimally, indicating that participants tended to express either very strong agreement or a neutral stance rather than moderate agreement or disagreement. Such a distribution highlights a generally positive perception toward the issues measured in the survey.

Overall, these results reflect a positive tendency among respondents toward the key statements, which may imply strong confidence, acceptance, or support for the topics assessed in the questionnaire. This concentrated preference for higher-end scores can also indicate clarity of the survey items, shared understanding among respondents, or strong alignment with their experiences and perspectives.

The next stage of the analysis involves processing the survey data into numerical form by converting each response into its corresponding Likert-scale value. These numerical values were then aggregated to produce composite scores for each variable in the research model. This step ensures that the data are ready for Structural Equation Modeling (SEM), which requires interval-level numerical input. Once the dataset was structured, it was used to construct the SEM model, consisting of the relationships among the four key variables: Human Resource Development ( $X_1$ ), Technology Utilization ( $X_2$ ), Work Motivation ( $Z$ ), and Business Performance & Autonomy ( $Y$ ).

Following model preparation, the next step involves evaluating correlations between variables and testing the overall model fit using commonly applied SEM quality measures such as the Goodness of Fit (GoF). This assessment is needed to determine whether the theoretical model aligns with the empirical data. Before running the SEM test, the descriptive statistics provide an early indication of how respondents perceive each variable

based on the average scores derived from the survey.

The results show a striking contrast between variables. Human Resource Development ( $X_1$ ) has an average score of 2.5, indicating that respondents perceive HR development in their business as insufficient and closer to a neutral standpoint. In contrast, Technology Utilization ( $X_2$ ) has a remarkably high average score of 4.8, showing strong agreement and widespread adoption of technology in business operations. This suggests that while human capital capacity may be limited, the use of digital tools is already well integrated.

Work Motivation ( $Z$ ) also demonstrates a high mean score of 4.67, reflecting strong internal motivation among respondents to continue improving and innovating within their business activities. This level of motivation may serve as a compensating factor for gaps in HR development. Meanwhile, Business Performance & Autonomy ( $Y$ ) holds a moderate average score of 3.25, indicating that respondents view their business performance as stable but not optimal. They perceive their enterprises as somewhat independent and sustainable, but not yet achieving their full potential.

Taken together, these descriptive results provide important signals for the upcoming SEM analysis. The strong technology utilization and high motivation contrast with weaker HR development, suggesting areas where improvement is necessary to enhance business performance. The SEM model will help clarify how these variables interact and which factors exert the most influence on overall MSME performance.

## 5. Conclusion

The findings indicate that Rollin' MSME is at a strategic turning point where significant growth is possible if it can effectively bridge the gap between its current human resource capabilities and the increasing demands of the digital era. While the business has shown strong motivation and high levels of technology adoption, its limited HR development remains a critical constraint that could hinder long-term progress. Strengthening human capital, through continuous skills training, digital literacy enhancement, and structured capacity-building, will therefore be essential in supporting sustained performance.

To fully capitalize on digital opportunities, Rollin' must continue to optimize its use of technology across operations, marketing, and customer engagement. Equally important is the cultivation of an intrinsically motivated workforce that is willing to learn, adapt, and participate actively in digital transformation initiatives. By aligning HR development, technology utilization, and work motivation, Rollin' can build a more resilient and competitive business model. In doing so, the enterprise will be better positioned to thrive in the digital economy and achieve greater autonomy and sustainable long-term growth.

## 6. References

- Aman-Ullah, A., Mehmood, W., Amin, S., & Abbas, Y. A. (2022). Human capital and organizational performance: A moderation study through innovative leadership. *Journal of Innovation & Knowledge*, 7(4), 100261.
- Aminullah, E., et al. (2024). Interactive components of the digital MSMEs ecosystem for an inclusive digital economy in Indonesia. *Journal of Knowledge Economy*, 15(1), 487–517.
- Angeline, M., & Andrian, T. (2025). The Indonesian MSME compass: Navigating sustainable performance with innovation, dynamic capabilities, and green entrepreneurial mindset.

- Journal of Lifestyle and SDGs Review*, 15(6), 738–747.
- Al-Adwan, A. S., Li, N., Al-Adwan, A., Abbasi, G. A., Albelbisi, N. A., & Habibi, A. (2023). Extending the technology acceptance model (TAM) to predict university students' intentions to use metaverse-based learning platforms. *Education and Information Technologies*, 28(11), 15381–15413.
- Baskaran, S., Lay, H. S., Ming, B. S., & Mahadi, N. (2020). Technology adoption and employees' job performance: An empirical investigation. *International Journal of Academic Research in Economics and Management Sciences*, 9(1).
- Desmaryani, S., Soleh, A., & Wiarta, I. (2024). Integration of technology acceptance models and government support to improve digital literacy. *Heliyon*, 10(14).
- Eshiett, I. O., & Eshiett, O. E. (2025). Employee motivation and sustainable productivity assessment in an automated work environment. *Journal of Comprehensive Business Administration Research*.
- Hendrawan, S. A., Chatra, A., Iman, N., Hidayatullah, S., & Suprayitno, D. (2024). Digital transformation in MSMEs: Challenges and opportunities in technology management. *Jurnal Informasi dan Teknologi*, 6(2), 141–149.
- Ibrahim, F., Münscher, J.-C., Daseking, M., & Telle, N.-T. (2025). The technology acceptance model and adopter type analysis in the context of artificial intelligence. *Frontiers in Artificial Intelligence*, 7, 1496518.
- Ortiz, A. F., Ortega, S. A., & Santos, A. R. (2025). Human capital and business success: Perspectives from emerging business professionals. *Journal of Lifestyle and SDGs Review*, 5(3), e04121.
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860.
- Şahin, F., & Şahin, Y. L. (2022). Drivers of technology adoption during the COVID-19 pandemic: The motivational role of psychological needs and emotions for pre-service teachers. *Social Psychology of Education*, 25(2), 567–592.
- Surya, B., Menne, F., Sabhan, H., Suriani, S., Abubakar, H., & Idris, M. (2021). Economic growth, increasing productivity of SMEs, and open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 20.
- Zhou, Q., Cheng, S., Fu, F., Zhang, J., & Jiang, Y. (2025). Enterprise digital transformation as a double-edged sword for employees: An investigation based on the job demands–resources model. *Humanities and Social Sciences Communications*, 12(1), 1718.