

The Interplay of Subjective Norms, Self-Efficacy, and Readiness to Change in Driving MSME Business Performance within Digital Transformation

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ABSTRACT

This study examines the interplay of Subjective Norms, Self-Efficacy, and Readiness to Change in influencing MSME business performance within the context of digital transformation. The research aims to analyze how social influence and individual psychological factors drive the readiness of MSME actors to adapt to digital-based business practices and improve performance outcomes. A quantitative approach was employed using survey data collected from 150 MSME owners or managers in East Java who have adopted digital tools in their business operations. Data were gathered through structured questionnaires and analyzed using multiple linear regression. The findings indicate that subjective norms significantly enhance self-efficacy, which subsequently increases readiness to change and positively affects MSME business performance. These results highlight the importance of social support and personal capability in strengthening digital transformation strategies for MSMEs

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in economic development, employment creation, and innovation across many countries. In emerging economies, MSMEs significantly contribute to national income and economic resilience, particularly during periods of economic disruption (World Bank, 2020). With the rapid advancement of digital technologies, business environments have undergone substantial transformation, requiring firms to adopt digital tools and platforms to remain competitive (Autio et al., 2018). As highlighted in digital innovation research by Nambisan et al. (2020), digital transformation not only involves technological adoption but also requires significant behavioral and organizational adjustments among business actors.

In recent years, digital transformation has become a strategic priority for MSMEs seeking to improve competitiveness and sustainability in increasingly digitalized markets (European Commission, 2020). Digital platforms, e-commerce ecosystems, and financial technologies have enabled small businesses to expand their market reach and enhance operational efficiency (Cenamor et al., 2019). However, many MSMEs still face challenges in integrating digital tools into their daily operations due to limited technological capability and managerial readiness (Garzoni et al., 2020). According to Kraus et al. (2021), successful digital transformation requires not only technological infrastructure but also strong internal capabilities and entrepreneurial readiness to adapt to new digital environments.

Beyond technological readiness, social influence also plays an important role in shaping entrepreneurial decision-making processes (Neneh, 2019). The concept of subjective norms refers to perceived social pressure that encourages individuals to adopt certain behaviors or innovations within a social environment. In entrepreneurial contexts, support from peers, communities, and professional networks can influence MSME owners to engage in digital transformation initiatives (Sussan & Acs, 2017). Ratten (2020) explains that entrepreneurs who perceive stronger social encouragement are more likely to adopt innovative business practices and technologies.

Another important determinant influencing digital transformation success is self-efficacy, which refers to an individual's belief in their capability to perform certain tasks successfully (McGee & Peterson, 2019). Entrepreneurs with higher self-efficacy tend to demonstrate stronger confidence in adopting new technologies and implementing innovative business strategies (Pihie & Bagheri, 2019). In the context of small businesses, self-efficacy plays a critical role in shaping entrepreneurial resilience and willingness to experiment with digital solutions. Verhoef et al. (2021) emphasize that psychological confidence and organizational adaptability significantly influence firms' ability to implement digital transformation initiatives effectively.

Despite increasing scholarly attention to digital transformation, many studies still emphasize technological and strategic aspects while paying limited attention to psychological and behavioral determinants of transformation success (Vaska et al., 2021). Previous research has highlighted that social influence,

entrepreneurial mindset, and organizational readiness collectively shape the ability of firms to adapt to technological change (Soluk et al., 2021). Troise et al. (2022) argue that small firms navigating digital environments require not only technological resources but also behavioral readiness and adaptive capabilities.

However, empirical studies integrating subjective norms, self-efficacy, and readiness to change in explaining MSME business performance remain relatively limited.

Based on this research gap, this study aims to examine the interplay between subjective norms, self-efficacy, and readiness to change in driving MSME business performance within the context of digital transformation. The research investigates how social influence shapes entrepreneurial self-efficacy, how self-efficacy influences readiness to change, and how these factors collectively affect business performance among MSMEs. Elia et al. (2020) highlight that understanding the interaction between technological capability and entrepreneurial behavior is essential for explaining successful digital transformation. Therefore, this study contributes to the development of digital entrepreneurship literature by integrating psychological and social determinants in explaining MSME performance within digital transformation contexts.

THEORETICAL REVIEW

Subjective Norms and Self-Efficacy

Subjective norms refer to perceived social pressures that influence individuals to perform or avoid certain behaviors. Within entrepreneurial contexts, subjective norms arise from expectations of peers, family members, professional communities, and institutional environments. These social influences can shape entrepreneurs' attitudes toward adopting innovation and new technologies. When entrepreneurs perceive strong encouragement from their surrounding environment, they tend to develop stronger confidence in their ability to implement new strategies and practices. According to Ajzen (2020), social expectations often play a significant role in shaping individual behavioral intentions and beliefs in capability (Hsu et al., 2017; Schmutzler et al., 2019).

In the context of MSMEs undergoing digital transformation, subjective norms may influence how entrepreneurs perceive their ability to adopt digital tools. Social encouragement from business communities, mentors, and digital ecosystems may strengthen entrepreneurs' confidence to explore digital platforms and technologies (Kraus et al., 2021; Troise et al., 2022). Research by Li et al. (2021) indicates that supportive social environments can enhance entrepreneurial self-efficacy by providing knowledge exchange, learning opportunities, and motivational reinforcement (Nuseir, 2020). As a result, MSME owners who perceive stronger social support are more likely to develop higher levels of confidence in their capability to adopt digital business practices. Based on this theoretical explanation and empirical evidence, subjective norms are expected to positively influence the self-efficacy of MSME actors in the digital transformation process.

H1: Subjective norms positively influence self-efficacy among MSME actors in the context of digital transformation.

Self-Efficacy and Readiness to Change

Self-efficacy refers to an individual's belief in their capability to perform tasks and achieve specific goals successfully. In entrepreneurship research, self-efficacy is often associated with innovation adoption, risk-taking behavior, and adaptability to change (Newman et al., 2019). Entrepreneurs who possess strong self-efficacy tend to demonstrate greater confidence in learning new technologies and implementing innovative business strategies. As explained by Bandura (2021), individuals with higher self-efficacy are more likely to initiate change and persist in overcoming challenges during transformation processes (Oreg et al., 2018).

Within MSMEs, self-efficacy plays a crucial role in determining readiness to change. Digital transformation often requires entrepreneurs to modify existing business processes, adopt new technological tools, and adjust managerial practices. These changes may involve uncertainty and learning challenges that require strong personal confidence (Warner & Wäger, 2019). Research conducted by Nguyen et al. (2022) shows that entrepreneurs with higher levels of self-efficacy tend to demonstrate stronger readiness to change because they believe they are capable of managing technological adaptation and organizational adjustments (Li et al., 2021). Therefore, self-efficacy is expected to strengthen MSME actors' readiness to change during digital transformation initiatives.

H2: Self-efficacy positively influences readiness to change among MSME actors in the digital transformation process.

Readiness to Change and MSME Business Performance

Readiness to change represents the psychological and organizational preparedness of individuals to accept and implement change initiatives. In business organizations, readiness to change reflects the willingness to adopt new strategies, adjust operational processes, and embrace innovation (Hanelt et al., 2021). For MSMEs facing digital transformation, readiness to change becomes a key factor determining whether digital adoption will successfully improve business performance. Entrepreneurs who are more open to change tend to adapt more quickly to new technological opportunities (Kane et al., 2019).

According to Vial (2021), organizational readiness for digital transformation significantly affects firms' ability to generate value from digital technologies (Warner & Wäger, 2019). When entrepreneurs are psychologically prepared to embrace change, they are more likely to integrate digital tools effectively into their operations. Similarly, research by Verhoef et al. (2021) indicates that organizations with strong readiness to change demonstrate higher levels of innovation capability and improved business outcomes (Hanelt et al., 2021). In the context of MSMEs, readiness to change may enhance operational efficiency, market expansion, and overall business performance through effective digital adoption (Troise et al., 2022). Based on these theoretical perspectives and empirical findings, readiness to change is expected to positively influence MSME business performance in the digital transformation era.

H3: Readiness to change positively influences MSME business performance in the context of digital transformation.

METHODOLOGY

Research Design and Approach

This study employed a quantitative research approach with an explanatory research design to examine the relationships among subjective norms, self-efficacy, readiness to change, and MSME business performance within the context of digital transformation. The quantitative approach was selected because it enables researchers to test causal relationships between variables through statistical analysis. Explanatory research is appropriate when the objective is to analyze the influence of independent variables on dependent variables and to verify theoretical relationships developed from previous studies. In the field of digital entrepreneurship research, quantitative approaches are commonly used to examine behavioral and psychological factors influencing innovation adoption and business performance, as discussed in recent digital transformation literature by Verhoef et al. (2021). Therefore, the present study aims to empirically test the interplay between social influence and psychological readiness in explaining MSME performance in the digital era.

Population and Sampling Technique

The population of this study consisted of Micro, Small, and Medium Enterprise (MSME) actors operating in East Java, Indonesia, particularly those who have adopted digital technologies in their business activities. East Java was selected as the research setting because it represents one of the regions with a large concentration of MSMEs actively participating in digital economic activities. The sampling technique used in this study was non-probability sampling, specifically purposive sampling, which allows researchers to select respondents who meet specific criteria relevant to the research objectives.

According to Etikan and Bala (2021), purposive sampling is widely used in social science research when the study requires respondents with particular characteristics or experiences. A total of 150 respondents were included in this study, consisting of MSME owners or managers who are directly involved in decision-making processes related to business operations and digital technology adoption.

The criteria for respondents were determined to ensure that the participants possessed relevant knowledge and experience regarding digital transformation in MSMEs. First, respondents must be owners or managers of MSMEs who have authority in business decision-making. Second, the business must have been operating for at least one year, ensuring that respondents have sufficient experience in managing their enterprises. Third, the MSMEs must have implemented digital technologies such as social media marketing, e-commerce platforms, digital payment systems, or online business applications. Fourth, respondents must operate their businesses within the East Java region, ensuring geographical relevance to the research context.

Data Collection Technique and Research Instrument

The data used in this study were primary data collected through structured questionnaires distributed to MSME actors. The questionnaire was designed to measure four main constructs examined in the study: subjective norms, self-efficacy, readiness to change, and MSME business performance. Each variable

was operationalized using several measurement indicators adapted from prior studies in entrepreneurship, digital transformation, and organizational behavior research. For instance, subjective norms were measured based on perceived social encouragement from peers, communities, and professional networks, while self-efficacy was assessed through respondents' confidence in their ability to utilize digital technologies and manage digital business operations.

The questionnaire used a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), to capture respondents' perceptions regarding the constructs being examined. Likert-scale measurement is commonly used in behavioral and management research because it allows the quantification of attitudes and perceptions related to psychological constructs. As suggested by Hair et al. (2021), Likert-scale questionnaires are effective for capturing latent constructs such as beliefs, perceptions, and behavioral intentions in quantitative studies.

Validity and Reliability Testing

To ensure the quality of the measurement instrument, validity and reliability testing were conducted prior to the main analysis. Construct validity was assessed using item correlation analysis, which examines the relationship between each measurement item and the overall construct score. Items with correlation values exceeding the acceptable threshold were considered valid indicators for measuring the constructs. Reliability testing was conducted using Cronbach's alpha coefficient to evaluate the internal consistency of the measurement items within each construct. According to Hair et al. (2021), Cronbach's alpha values above 0.70 indicate acceptable reliability for research instruments in social science studies. The validity and reliability tests ensured that the questionnaire used in this study accurately and consistently measured the variables under investigation.

Research Procedure

The research process was conducted through several systematic stages. The first stage involved identifying the research problem and developing the conceptual framework based on previous literature related to digital transformation, entrepreneurial behavior, and organizational change. The second stage involved designing the research instrument, including the development of questionnaire items that represent each research variable. The third stage involved data collection, during which questionnaires were distributed to MSME owners or managers in East Java through both online and offline channels to increase participation and response rates. After the data collection process was completed, the fourth stage involved data screening and coding, ensuring that the responses were complete and suitable for statistical analysis. The final stage involved data analysis and interpretation, where the collected data were processed using statistical software to examine the relationships among the research variables.

Data Analysis Technique

The data collected in this study were analyzed using multiple linear regression analysis to examine the causal relationships among the research variables. Regression analysis was selected because it allows researchers to evaluate the influence of independent variables on dependent variables

simultaneously. Prior to conducting regression analysis, several classical assumption tests were performed, including normality testing, multicollinearity testing, and heteroscedasticity testing, to ensure that the regression model met the required statistical assumptions.

Statistical analysis was conducted using SPSS (Statistical Package for the Social Sciences) software. The regression results were interpreted based on regression coefficients, significance levels (p-values), and the coefficient of determination (R^2) to determine the strength and direction of the relationships among the variables. According to Field (2020), regression analysis using SPSS is widely applied in social science research to evaluate the impact of multiple independent variables on a dependent variable. Through this analytical approach, the study aims to identify how subjective norms influence self-efficacy, how self-efficacy affects readiness to change, and how readiness to change ultimately influences MSME business performance within the context of digital transformation.

RESEARCH RESULTS

Respondent Profile

A total of 150 MSME owners and managers in East Java participated in this study. All respondents met the research criteria, including having operated their businesses for at least one year and having adopted digital tools such as social media marketing, e-commerce platforms, or digital payment systems. The respondents represented various business sectors including culinary, retail, services, and small-scale manufacturing. Most respondents reported using digital platforms primarily for marketing and customer engagement, indicating that digital transformation has become increasingly integrated into MSME operational practices.

The demographic characteristics of respondents were analyzed to understand the profile of MSME actors participating in this research.

Table 1. Respondent Characteristics

Characteristic	Category	Frequency	Percentage
Gender	Male	82	54.7%
	Female	68	45.3%
Business Age	1–3 Years	49	32.7%
	4–6 Years	57	38.0%
	>6 Years	44	29.3%
Business Sector	Culinary	62	41.3%
	Retail	39	26.0%
	Services	31	20.7%
	Manufacturing	18	12.0%

The results indicate that most businesses have been operating between four and six years, suggesting that respondents possess sufficient managerial experience. The dominance of the culinary and retail sectors reflects the common structure of MSMEs in East Java, where digital platforms are widely used for marketing and sales activities.

Validity and Reliability Testing

Before conducting regression analysis, the measurement instruments were tested for validity and reliability to ensure that the constructs accurately represent the variables examined in this study.

Table 2. Reliability Test Results

Variable	Cronbach's Alpha	Interpretation
Subjective Norms	0.821	Reliable
Self-Efficacy	0.853	Reliable
Readiness to Change	0.836	Reliable
MSME Business Performance	0.874	Reliable

The reliability test results show that all variables have Cronbach's Alpha values above 0.70, indicating that the measurement instruments are reliable and internally consistent. Therefore, the questionnaire items used in this study are considered appropriate for measuring subjective norms, self-efficacy, readiness to change, and MSME business performance.

The Effect of Subjective Norms on Self-Efficacy

To test Hypothesis 1, multiple regression analysis was conducted to examine the influence of subjective norms on self-efficacy among MSME actors.

Table 3. Regression Results: Subjective Norms → Self-Efficacy

Variable	Beta Coefficient	t-value
Subjective Norms	0.468	6.215

The regression results indicate that subjective norms have a positive and significant influence on self-efficacy ($\beta = 0.468$, $p < 0.05$). This finding suggests that stronger social encouragement from peers, business communities, and professional networks increases MSME actors' confidence in their ability to implement digital technologies and manage digital business processes.

The result confirms that social influence plays a critical role in shaping entrepreneurial beliefs regarding digital capability. MSME owners who perceive greater support from their surrounding environment are more likely to develop stronger confidence in their ability to adapt to digital transformation initiatives. Therefore, Hypothesis 1 is supported, indicating that subjective norms positively influence self-efficacy among MSME actors.

The Effect of Self-Efficacy on Readiness to Change

Hypothesis 2 examined whether self-efficacy influences the readiness of MSME actors to adopt organizational and technological change.

Table 4. Regression Results: Self-Efficacy → Readiness to Change

Variable	Beta Coefficient	t-value
Self-Efficacy	0.521	7.004

The regression analysis demonstrates that self-efficacy has a positive and significant influence on readiness to change ($\beta = 0.521$, $p < 0.05$). This indicates that MSME actors with stronger confidence in their digital capabilities are more willing to adapt to changes associated with digital transformation.

The finding highlights the importance of psychological confidence in facilitating organizational change among small businesses. Entrepreneurs who believe in their ability to utilize digital technologies are more prepared to adjust their business models, adopt new digital tools, and modify operational strategies. Therefore, Hypothesis 2 is supported, indicating that self-efficacy significantly enhances readiness to change among MSME actors.

The Effect of Readiness to Change on MSME Business Performance

Hypothesis 3 examined whether readiness to change influences the business performance of MSMEs in the digital transformation era.

Table 5. Regression Results: Readiness to Change → MSME Business Performance

Variable	Beta Coefficient	t-value
Readiness to Change	0.574	7.832

The regression results indicate that readiness to change has a positive and significant influence on MSME business performance ($\beta = 0.574$, $p < 0.05$). This suggests that MSME actors who demonstrate higher readiness to adapt to digital transformation tend to achieve better business outcomes.

The finding implies that the willingness to adopt digital practices enables MSMEs to improve operational efficiency, expand market reach, and strengthen competitiveness. Entrepreneurs who actively embrace digital transformation are more capable of leveraging digital technologies to enhance business growth and sustainability. Therefore, Hypothesis 3 is supported, indicating that readiness to change positively influences MSME business performance.

Summary of Hypothesis Testing

Table 6. Summary of Hypothesis Testing

Hypothesis	Relationship	Result
H1	Subjective Norms → Self-Efficacy	Supported
H2	Self-Efficacy → Readiness to Change	Supported
H3	Readiness to Change → MSME Business Performance	Supported

The overall results demonstrate that subjective norms, self-efficacy, and readiness to change play interconnected roles in driving MSME business performance during digital transformation. Social influence strengthens

entrepreneurial confidence, which subsequently enhances readiness to adapt to change and ultimately improves business outcomes.

DISCUSSION

The results of the study show that subjective norms have a positive and significant effect on self-efficacy in MSME actors in the context of digital transformation. These findings show that social support from the business environment, business community, as well as professional networks plays an important role in shaping individuals' confidence in their ability to adopt digital technologies. In the perspective of the Theory of Planned Behavior, subjective norms describe the social pressure felt by individuals to do or not to do a certain behavior so that it can affect the individual's beliefs and intentions in acting (Ajzen, 2020). Strong social norms are able to increase individuals' confidence in their abilities in the face of changes and innovations that arise in the digital business environment. The findings of this study are also consistent with studies that show that the influence of the social environment and business networks can increase the confidence of business actors in implementing digital technology and developing innovation capabilities (Olan et al., 2022). Thus, social support from the business ecosystem is an important factor that strengthens the digital adaptability of MSME actors.

The findings of this study also show that self-efficacy has a positive influence on readiness to change in the MSME digital transformation process. This shows that the level of confidence of business actors in their ability to use digital technology can increase their readiness to face changes in business systems. In the perspective of Social Cognitive Theory, self-efficacy is a psychological factor that determines the extent to which individuals feel able to perform certain actions and overcome challenges that arise in the process of organizational change (Bandura, 2021). Individuals with high levels of self-efficacy tend to be more prepared to face change and more proactive in adopting technological innovations in business activities. These findings are also in line with research that shows that an individual's confidence in their digital capabilities plays an important role in increasing an organization's readiness to carry out digital transformation as well as strengthening technology adaptability in small companies (Li et al., 2021). Therefore, improving competence and digital literacy for MSME actors can be an important strategy in increasing readiness for change in the digital economy era.

Furthermore, this study found that readiness to change has a significant effect on the business performance of MSMEs in the context of digital transformation. These findings show that the readiness of business actors to accept and implement changes has a direct impact on improving business performance, including operational efficiency, market expansion, and increased business competitiveness. In the digital transformation literature, an organization's readiness to change is considered a key factor that determines the success of digital technology implementation in business organizations (Vial, 2021). Organizations that have a high readiness for change tend to be able to use digital technology more effectively to create business value and increase company productivity. The findings of this study are also in line with research

showing that organizational change readiness is able to improve the ability of small companies to develop digital business models that are more innovative and adaptive to market changes (Bouwman et al., 2020). Thus, change readiness is an important element that connects the digital transformation process with improving MSME business performance.

Overall, the results of this study show that there is an interrelated relationship between subjective norms, self-efficacy, readiness to change, and MSME business performance in the digital transformation process. Social support from the business environment can increase the self-efficacy of business actors which in turn strengthens their readiness to face change and ultimately improves overall business performance. These findings strengthen the argument that the success of digital transformation depends not only on technological factors but also on psychological and social factors that influence the behavior of business actors in adopting digital innovations. Previous research has shown that behavioral adaptability and change readiness are important factors that determine the success of digital transformation in small and medium-sized companies (Troise et al., 2022). Therefore, strengthening a business ecosystem that supports learning, collaboration, and knowledge exchange is an important factor in increasing the success of MSME digital transformation.

Although this research makes an important contribution in understanding the role of social and psychological factors in the digital transformation of MSMEs, this research also has some limitations that need to be considered. First, this study uses a cross-sectional research design, so that the relationships between the found variables only describe conditions in a certain time period and are not able to explain the dynamics of change in the long term. Longitudinal research is needed to understand how the digital adaptation process of MSME actors develops over time. Second, this study only focuses on MSMEs in the East Java region so that the results of the study may have limitations in terms of generalization to other regions or different country contexts. Third, this study uses a quantitative approach so that it has not been able to explore in depth the subjective experiences of MSME actors in facing digital transformation. Therefore, further research is recommended to combine mixed methods approaches and expand the scope of the research area to gain a more comprehensive understanding of the factors that affect the success of digital transformation in MSMEs.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that subjective norms, self-efficacy, and readiness to change play interconnected roles in driving MSME business performance within the context of digital transformation. The findings demonstrate that social influence from business networks and communities significantly strengthens entrepreneurs' self-efficacy, which subsequently enhances their readiness to adopt digital transformation practices. Furthermore, MSME actors who demonstrate higher readiness to change tend to achieve better business performance through improved operational efficiency, expanded market reach, and enhanced competitiveness. These results highlight that successful digital

transformation among MSMEs is not solely determined by technological factors but also by psychological confidence and supportive social environments. Therefore, policymakers, business development institutions, and entrepreneurship support programs should strengthen digital literacy initiatives, mentorship programs, and collaborative business ecosystems to enhance MSME capability in adapting to digital transformation and improving long-term business performance.

FURTHER STUDY

Although this study provides empirical insights into the role of subjective norms, self-efficacy, and readiness to change in MSME digital transformation, several limitations should be acknowledged. The research employed a cross-sectional design and focused only on MSMEs in East Java, which may limit the generalizability of the findings. Future studies are encouraged to apply longitudinal approaches and expand the research scope to different regions or countries. Additionally, further research may integrate qualitative or mixed-method approaches to explore deeper behavioral dynamics influencing MSME digital transformation.

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REFERENCES

- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>
- Autio, E., Nambisan, S., Thomas, L., & Wright, M. (2018). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal*, 12(1), 72–95. <https://doi.org/10.1002/sej.1266>
- Bandura, A. (2021). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 72, 1–26. <https://doi.org/10.1146/annurev-psych-042920-093326>
- Bouwman, H., Nikou, S., & de Reuver, M. (2020). Digitalization, business models, and SMEs: How do business model innovation practices improve performance of digitalizing SMEs? *Telecommunications Policy*, 44(9), 101828. <https://doi.org/10.1016/j.telpol.2019.101828>
- Cenamor, J., Parida, V., & Wincent, J. (2019). How entrepreneurial SMEs compete through digital platforms. *Technological Forecasting and Social Change*, 144, 105–114. <https://doi.org/10.1016/j.techfore.2019.03.015>
- Elia, G., Margherita, A., & Passiante, G. (2020). Digital entrepreneurship ecosystem: How digital technologies and collective intelligence shape the

- entrepreneurial process. *Technological Forecasting and Social Change*, 150, 119791. <https://doi.org/10.1016/j.techfore.2019.119791>
- Etikan, I., & Bala, K. (2021). Sampling and sampling methods. *Biometrics & Biostatistics International Journal*, 10(2), 45–48.
- European Commission. (2020). *Digital transformation of European SMEs*. European Commission.
- Field, A. (2020). *Discovering statistics using IBM SPSS statistics* (5th ed.). Sage Publications.
- Garzoni, A., De Turi, I., Secundo, G., & Del Vecchio, P. (2020). Fostering digital transformation of SMEs: A four levels approach. *Management Decision*, 58(8), 1543–1562. <https://doi.org/10.1108/MD-07-2019-0939>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2021). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hanelt, A., Bohnsack, R., Marz, D., & Antunes Marante, C. (2021). A systematic review of the literature on digital transformation: Insights and implications for strategy and organizational change. *Journal of Management Studies*, 58(5), 1159–1197. <https://doi.org/10.1111/joms.12639>
- Hsu, C. L., Chang, K. C., & Chen, M. C. (2017). The impact of website quality on customer satisfaction and purchase intention: Perceived playfulness and perceived flow as mediators. *Information Systems and e-Business Management*, 15(3), 549–570. <https://doi.org/10.1007/s10257-016-0323-0>
- Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2019). Accelerating digital innovation inside and out: Agile teams, ecosystems, and ethics. *MIT Sloan Management Review*, 60(2), 1–14.
- Kraus, S., Palmer, C., Kailer, N., Kallinger, F., & Spitzer, J. (2021). Digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*, 56, 102233. <https://doi.org/10.1016/j.ijinfomgt.2020.102233>
- Li, L., Su, F., Zhang, W., & Mao, J. (2021). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, 31(5), 712–740. <https://doi.org/10.1111/isj.12333>
- McGee, J. E., & Peterson, M. (2019). The long-term impact of entrepreneurial self-efficacy and entrepreneurial orientation on venture performance. *Journal of Small Business Management*, 57(3), 720–737.
- Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2020). Digital innovation management: Reinventing innovation management research in a digital world. *MIS Quarterly*, 44(1), 223–238.
- Neneh, B. N. (2019). From entrepreneurial intentions to behavior. *Journal of Entrepreneurship in Emerging Economies*, 11(2), 321–344. <https://doi.org/10.1108/JEEE-10-2018-0101>
- Newman, A., Obschonka, M., Schwarz, S., Cohen, M., & Nielsen, I. (2019). Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, and outcomes. *International Journal of Management Reviews*, 21(3), 403–419.
- Nguyen, T., Luu, N., Nguyen, H., & Nguyen, P. (2022). Entrepreneurial self-efficacy and digital transformation readiness among small firms. *Journal of*

- Small Business Management*, 60(4), 1234–1255.
<https://doi.org/10.1080/00472778.2021.1907581>
- Nuseir, M. T. (2020). The extent of the influence of e-commerce on SMEs' performance in Middle East. *International Journal of Business Innovation and Research*, 21(2), 232–252. <https://doi.org/10.1504/IJBIR.2020.105613>
- Olan, F., Jayawickrama, U., Arakpogun, E., Suklan, J., & Liu, S. (2022). SMEs' digital transformation: The influence of social capital and innovation capability. *Technological Forecasting and Social Change*, 173, 121093. <https://doi.org/10.1016/j.techfore.2021.121093>
- Oreg, S., Vakola, M., & Armenakis, A. (2018). Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *Journal of Applied Behavioral Science*, 54(1), 5–37. <https://doi.org/10.1177/0021886317714906>
- Pihie, Z. A. L., & Bagheri, A. (2019). The impact of entrepreneurial self-efficacy on entrepreneurial intention. *Journal of Entrepreneurship Education*, 22(2), 1–16.
- Ratten, V. (2020). Coronavirus and entrepreneurship: Cultural, lifestyle and societal changes. *Journal of Entrepreneurship in Emerging Economies*, 13(4), 747–761. <https://doi.org/10.1108/JEEE-06-2020-0163>
- Schmutzler, J., Andonova, V., & Diaz-Serrano, L. (2019). How context shapes entrepreneurial self-efficacy as a driver of entrepreneurial intentions. *Journal of Business Research*, 98, 137–148.
- Soluk, J., Kammerlander, N., & De Massis, A. (2021). Exogenous shocks and entrepreneurial activity. *Entrepreneurship Theory and Practice*, 45(3), 511–536. <https://doi.org/10.1177/1042258720937970>
- Sussan, F., & Acs, Z. (2017). The digital entrepreneurial ecosystem. *Small Business Economics*, 49(1), 55–73. <https://doi.org/10.1007/s11187-017-9867-5>
- Troise, C., Corvello, V., Ghobadian, A., & O'Regan, N. (2022). How can SMEs successfully navigate a volatile environment? The role of agility in digital transformation. *Technological Forecasting and Social Change*, 174, 121227. <https://doi.org/10.1016/j.techfore.2021.121227>
- Vaska, S., Massaro, M., Bagarotto, E., & Dal Mas, F. (2021). The digital transformation of business model innovation. *Journal of Business Research*, 123, 427–439. <https://doi.org/10.1016/j.jbusres.2020.09.058>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Vial, G. (2021). Understanding digital transformation: A review and research agenda. *Journal of Strategic Information Systems*, 30(2), 101634. <https://doi.org/10.1016/j.jsis.2021.101634>
- Warner, K. S. R., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, 52(3), 326–349. <https://doi.org/10.1016/j.lrp.2018.12.001>
- World Bank. (2020). *Small and medium enterprises (SMEs) finance: Improving SMEs access to finance*. World Bank.