

# The Influence of Entrepreneurial Competence, Digital Transformation And Innovation Behavior on The Development of SMEs

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## Abstract

Entrepreneurial orientation has become a highly significant construct in the innovation studies literature. Especially for SMEs, its role has been widely recognised in almost all regional contexts around the world. This study aims to determine how much influence entrepreneurial competence, digital transformation and innovation behaviour have on the development of SMEs. This type of research is descriptive with a quantitative approach, the data source uses primary data with data collection methods through distributing questionnaires. The population in this study were 40 respondents using non-probability sampling techniques using saturated samples. The data analysis method used is multiple linear regression to test the hypothesis built using the SPSS tool. The results of this study indicate that the entrepreneurial competency variable affects the development of SMEs, the transformation variable has a significant effect on the development of SMEs, and the product innovation variable affects the development of SMEs.

**Keyword:** *entrepreneurial competencies, digital transformation, innovation behavior, small and medium enterprises*

## 1. Introduction

According to the Global Entrepreneurship Index, Indonesia is still ranked 74th. This indicates that the effectiveness of the business ecosystem, human resource competence, ease of financing, technology, innovation, and business growth still need to be further developed (MNCtrijaya.com, 2023). The development of Micro, Small, and Medium Enterprises (SMEs) is one of the important pillars in the economy of many countries, including Indonesia. SMEs contribute significantly to Gross Domestic Product (GDP) and employment (Anatan & Nur, 2023). SMEs urgently need the presence of the government to issue policies that can sustain SMEs as they play an important role in the global economy, including in Indonesia, with significant contributions to job creation and economic growth (Adam & Alarifi, 2021; Kornelius et al., 2020). However, SMEs often face various challenges in their business development and growth, such as limited access to resources, technology, and markets (Chatterjee et al., 2021). To overcome these challenges, improving entrepreneurial competencies, digital transformation adoption, and innovation behaviour are key factors that can support the development of SMEs (Vial, 2019).

(Prakasa & Putri, 2020) describes competence as individual characteristics such as knowledge, skills, and abilities needed to perform a particular job. The competence of an entrepreneur is needed in achieving business success (Apriyani & Kustini, 2023). Entrepreneurial competencies are interrelated attitudes, knowledge, and individual skills that need to be trained and developed by all business people (Nuryanti & Hanifah, 2022). Research shows that entrepreneurial competencies have a positive impact on the development and sustainability of SMEs (Corvello et al., 2022). With good competence, entrepreneurs can manage resources more efficiently and be adaptive to market changes (Trabucchi & Buganza, 2021).

Small and medium-sized enterprises (SMEs) must be able to adapt to the new round of science, technological revolution, and industrial transformation trends and improve their ability to make smart, fast, and agile decisions in the digital era (Teng et al., 2022). Digital transformation is not just an option for companies but digital transformation has become a strategic imperative for survival and competition (Mustafa Ayobami Raji et al., 2024). Digital technology is the basis of digital transformation, digital skills are the key to digital transformation, and digital transformation strategy is the main task of digital transformation (Teng et al., 2022). The widespread availability of high-speed internet, coupled with sophisticated telecommunications networks can make it easier for SMEs to innovate (González-Varona et al., 2021).

As an entrepreneur, having an attitude of innovation behaviour is of key importance. This includes openness to new ideas. The concept of innovation behaviour reflects actions taken by individuals or organisations to attract customers by adding value, and improving product or service offerings with the aim of achieving success.(Domi et al., 2020). In this context, (Sriviboon, 2020) highlights the critical importance of technology adoption and innovation for organisational success. He asserted that entrepreneurial orientation plays a significant role in predicting the adoption of such technologies and innovations, suggesting a close relationship between entrepreneurial attitude and competence to adopt relevant technologies for organisational advancement. Therefore, for an entrepreneur, having a strong entrepreneurial orientation can be an invaluable asset in stimulating innovation and achieving success.

Based on the explanation of research stating that the important role and ability of SMEs actors to create innovation in the face of digital transformation that affects entrepreneurial development. Previous research shows that entrepreneurial competence is the core of entrepreneurship, and digital transformation is a driver of sustainability. Companies need to develop digital innovation to achieve a balanced economic impact for SMEs (Gomez-Trujillo & Gonzalez-Perez, 2022; Gunartin et al., 2023). Thus, there are opportunities for SMEs to utilise the capabilities of digital production methods to support the path to sustainability (Šimberová et al., 2022; Telukdarie et al., 2022).

Small and Medium Enterprises (SMEs) is a trade sector currently faced with the problem of declining sales, difficulties in obtaining raw materials, hampered production and distribution, capital difficulties, lack of information technology knowledge and business network constraints (W. Adda et al., 2020). SMEs face challenges in the adoption of digital transformation and innovative behaviours, such as online marketing, digital inventory management, and digital payments. Many lack the skills and knowledge for adaptive entrepreneurial strategies. This study analyses the influence of entrepreneurial competence, digital transformation and innovative behaviour on the development of SMEs, as well as how these factors interact and contribute to the growth of SMEs in the digital era. The results are expected to provide insights for SMEs owners, industry, and government in designing strategies and policies that support the development of SMEs in the digital economy.

## **2. Literature Review**

### **2.1 Entrepreneurial Competence**

Entrepreneurial competencies are defined as “underlying characteristics such as knowledge, motives, traits, self-image, social roles, and specific skills that result in the birth, survival or growth of a business” (Khan et al., 2020). Entrepreneurial competence is a moderator between technological, organisational and environmental factors (Hussain et al., 2022). Psychological characteristics of entrepreneurs determine the success of their business, among the most identified characteristics, we find: the need for autonomy, the need for achievement, the desire to accept challenges, and the desire for self-enrichment, etc. (Mejri & Zouaoui, 2020). Therefore, this research uses hypotheses:

#### **H1 : The effect of entrepreneurial competence on the development of SMEs**

### **2.2 Transformation Digital**

According to (Verhoef et al., 2021), digitisation is converting analogue information into digital. Digitisation does not add value to activities. On the other hand, despite conceptual differences, the terms ‘digitalisation’ and ‘digital transformation’ are often used interchangeably and refer to broad concepts that affect the ecosystem. Digitalisation is a process of increasing competitive advantage, for example, by offering new services through virtual channels or enabling new systems (Mustafa Ayobami Raji et al., 2024). Given its huge impact, understanding the dynamics of SMEs in the context of digital transformation is critical to fostering resilient and inclusive economic growth (Amoah et al., 2022; Gherghina et al., 2020). Based on the explanation that digital is very important for SMEs, the researcher uses a hypothesis:

#### **H2 : The effect of transformation digital on the development of SMEs**

### **2.3 Innovation Behaviour**

According to (Haris & Usman, 2023; Karimi et al., 2023) innovative behaviour is defined as individual behaviour that results in new and useful work roles, processes, products or procedures. In addition, it views innovative work behaviour as the ‘willingness’ of an individual to develop innovations. The term ‘willingness’ here refers to more attitude or intention. Innovative behaviour can make SMEs able to compete with the market, so the researcher raised a hypothesis:

#### **H3 : The effect of innovation behaviour on the development of SMEs**

### **2.4 Development of SMEs**

SMEs are productive businesses owned by individuals or business entities that meet the criteria as a micro business (Yuliana et al., 2024). Small and Medium Enterprises (SMEs) are critical to economic growth in developing countries, including Indonesia. According to Law No. 20 of 2008, SMEs are companies with assets of less than IDR 200 million and sales of up to IDR 2.5 billion. Despite their significant contribution, SMEs face barriers such as limited exports (only 15.65% of total exports) and low utilisation of e-commerce (only 24% of total SMEs) (Chong et al., 2022). Based on this condition, the hypothesis that can be proposed is:

#### **H4 : The effect of entrepreneurial competence, digital transformation, and innovation behaviour on the development of SMEs**

### 3. Material and Method

#### 3.1 Design Study

This study uses probability sampling, and the population in this study is unknown, so it uses accidental techniques with the number of samples used as many as 40 respondents. To fulfil the requirements of filling out the questionnaire, respondents are SMEs who have a business age of more than 3 months. This research uses a quantitative approach by distributing questionnaires through social media as items that have been compiled and developed previously as primary data.

#### 3.2 Data Analysis

This study uses multiple linear regression data analysis to determine validity and reliability and test the hypothesis that entrepreneurial competence, digital transformation and innovation behaviour partially and simultaneously affect the development of SMEs.

### 4. Result

#### Respondent Characteristics

The respondents analysed in this study were 40 respondents with several categories.

**Table 1.** Respondent Characteristics

Category	Variable	Number	Percentage
Age	18-25	32	80%
	26-40	4	10%
	41-60	1	2,5%
	>60	3	7,5%
Business Type	Culinary	16	40%
	Fhasion	4	10%
	Beauty	3	7,5%
	Agribusiness	3	7,5%
	Etc.	24	65%
Age of business	<1 year	5	12,5%
	1-10 year	30	75%
	11-20 year	3	7,5%
	>20 year	2	5%

Based on **Table 1.** it can be seen that out of 40 respondents it can be concluded that generation Z dominates SMEs by 80%, the majority of business actors run culinary businesses and with the most business age ranging from 1-10 years.

#### Uji Descriptive statistic

**Table 2.** Descriptive Statistic Result

Indicator	N	Mean	Std. Deviation	Information
Learning new things (X1.7)	40	4.5000	.64051	Highest
Analysing risk (X1.9)	40	3.9000	.70892	Lowest
Market share (X2.4)	40	4.1500	.69982	Highest
Organisational culture (X2.7)	40	3.7250	.96044	Lower
Awards (X3.8)	40	4.2750	.71567	Highest

New market opportunities (X3 .1)	40	3.9000	.77790	Lower
Teknologi (Y.5)	40	3.9500	.71432	Highest
Kebijakan (Y.7)	40	3.3000	1.06699	Lowest

Based on Table 2, it can be observed that for indicator X1, "Learning new things" has the highest mean frequency, namely 4.5000 with a standard deviation of 0.64051, indicating that it is in the good category. On the other hand, the "Analyzing risk" indicator is the lowest, at 3.9000 with a standard deviation of 0.70892, still in the good category.

The highest indicator for variable X2 is also seen in the "Market share" indicator, with a mean value of 4.1500 and a standard deviation of 0.69982, indicating that it is in the very good category. Meanwhile, the "Organizational culture" indicator is the lowest, with a mean value of 3.7250 and a standard deviation of 0.96044, still in the good category.

For variable X3, the highest indicator is observed in the "Awards" indicator, with a mean value of 4.2750 and a standard deviation of 0.71567, meaning that it is in the very good category. On the other hand, the "New market opportunities" indicator is the lowest, with a mean value of 3.9000 and a standard deviation of 0.77790, still in the good category.

Additionally, for variable Y, the highest indicator is "Technology" with a mean value of 3.9500 and a standard deviation of 0.71432, indicating that it is in the good category. Meanwhile, the "Competitive Pressure" indicator is the lowest, with a mean value of 3.3000 and a standard deviation of 1.06699, still in the good category.

## Uji Hipotesis

**Tabel 3.** Simultaneous Test Result

Model	Sum of Squares	df	R Square	F	Sig.
Regression	647.805	3	.740	34.099	.000 <sup>b</sup>
Residual	227.970	36			
Total	875.775	39			

The regression model is considered have effect if the significance value is  $<0.05$ . Examining the data in Table 1, it is evident that the significance value is .000 ( $<0.05$ ), indicating that the variables Entrepreneurial Competence (X1), Digital Transformation (X2), and Innovative Behavior (X3) collectively have a significant impact on SMEs Development (Y). The R Square value is .740, meaning that three variables collectively account for 74% of the variance in SMEs Development.

## Analisis Uji T

**Tabel 4.** Parsial Regression Test Result

Model	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig
(constant)	3.958	4.522		.875	.387
X1	.221	.111	.281	1.986	.055
X2	1.372	.193	1.214	7.124	.000
X3	-.571	.151	-.721	-3.769	.001

a. Dependen Variable: Y

Based on the analysis of the T-test as presented in Table 4, the results are as follows:

1. The significance value for Entrepreneurial Competence (X1) is .055 ( $>0.05$ ), which leads to the conclusion that the Entrepreneurial Competence variable does not influence the SMEs Development variable (Y).
2. The significance value for Digital Transformation (X2) is .000 ( $<0.05$ ), therefore, it can be concluded that the Digital Transformation variable significantly impacts the SMEs Development variable (Y).
3. The significance value for Innovative Behavior (X3) is .001 ( $<0.05$ ), thus it can be concluded that the Innovative Behavior variable significantly influences the SMEs Development variable (Y).

## **5. Discussion**

### **The influence of Entrepreneurial Competence, Digital Transformation, and Innovation Behavior on SMEs Development simultaneously.**

Based on the primary data questionnaire processed using SPSS, the test results indicate that the simultaneous test (F-test) shows that the independent variables collectively or simultaneously significantly influence the dependent variable. This is because the significance value is below the threshold, thereby concluding that the Entrepreneurial Competence (X1), Digital Transformation (X2), and Innovative Behavior (X3) variables significantly influence SMEs Development (Y) simultaneously.

### **The partial effects of Entrepreneurial Competence, Digital Transformation, and Innovative Behavior on SMEs Development were examined.**

The T-test analysis was based on data results with specific criteria: if the significance value is below  $<0.05$ , it can be concluded that there is a significant influence. Conversely, if the significance value exceeds the threshold  $>0.05$ , it is concluded that there is no significant influence.

The influence of Entrepreneurial Competence on SMEs Development.

The significance value for Entrepreneurial Competence (X1) exceeds the threshold  $>0.05$ . Therefore, it can be concluded that the Entrepreneurial Competence variable (X1) does not have a significant effect on SMEs Development (Y). With a higher significance value, we can infer that there is not strong statistical evidence to support a significant influence between the Entrepreneurial Competence variable (X1) and SMEs Development variable (Y). In other words, the test results indicate that fluctuations that may occur in the sample data render the relationship statistically insignificant. The statistical test results show that entrepreneurial competence does not have a significant impact on SMEs development. This raises several important implications. Other factors such as economic conditions, access to capital, or government policies may be more dominant in influencing SMEs' success.

The influence of Digital Transformation on SMEs Development.

Based on the statistical test results, Digital Transformation has a significant impact on Competitive Advantage. This outcome indicates that in the tested environment and population, the Digital Transformation variable (X2) has a strong statistical effect on SMEs Development variable (Y). The factor of Digital Transformation, in this case, plays a crucial role in achieving SMEs development, and these results suggest that businesses leveraging digital technology

have a higher likelihood of attaining a competitive advantage in their endeavors. In statistical analysis, if the significance value is less than the threshold, we can conclude that the influence of the variable is significant. In this case, the test results show that the Digital Transformation variable has a significant impact on SMEs development.

The impact of Innovative Behavior on SMEs Development.

Partial test results using SPSS indicate that innovative behavior significantly affects SMEs development. This suggests that by adopting innovations, SMEs can enhance their competitiveness through the development of superior new products or services compared to competitors. Innovation also enables SMEs to improve operational efficiency, thereby reducing production costs and increasing profitability. Moreover, innovative behavior can assist SMEs in understanding and meeting the continuously evolving market needs, enabling them to capture new market opportunities and retain existing customers.

## 6. Conclusion, Implication, and Recommendation

The research findings indicate that entrepreneurial competence does not significantly impact the development of Small and Medium Enterprises (SMEs). In contrast, digital transformation and innovation behavior have proven to be highly influential in the development of SMEs. Overall, these three variables, when considered together, provide a positive impact on SME growth. Therefore, focusing on digitalization and innovation becomes crucial for effective SME development.

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## 8. References

- Adam, N. A., & Alarifi, G. (2021). Innovation Practices For Survival Of Small And Medium Enterprises (Smes) In The Covid-19 Times: The Role Of External Support. *Journal Of Innovation And Entrepreneurship*, 10(1), 15. <https://doi.org/10.1186/S13731-021-00156-6>
- Amoah, J., Belas, J., Dziwornu, R., & Khan, K. A. (2022). Enhancing Sme Contribution To Economic Development: A Perspective From An Emerging Economy. *Journal Of International Studies*.
- Anatan, L. & Nur. (2023). Micro, Small, And Medium Enterprises' Readiness For Digital Transformation In Indonesia. *Economies*, 11(6), 156. <https://doi.org/10.3390/Economies11060156>
- Apriyani, M., & Kustini, K. (2023). The Influence Of Entrepreneurial Competence And Entrepreneurial Knowledge On Business Success In Msmes In Madiun City. *Jurnal Syntax Admiration*, 4(6), 699–717. <https://doi.org/10.46799/Jsa.V4i6.625>
- Chatterjee, S., Rana, N. P., Dwivedi, Y. K., & Baabdullah, A. M. (2021). *Understanding Ai Adoption In Manufacturing And Production Firms Using An Integrated Tam-Toe Model*.
- Chong, W. Y., Hong, P. H. K., & Teck, T. S. (2022). Small And Medium-Sized Businesses In Malaysia Can Look Forward To The Future Of Co-Creation, A Literature Review. *International Journal Of Professional Business Review*, 7(6), E0583. <https://doi.org/10.26668/Businessreview/2022.V7i6.E583>
- Corvello, V., De Carolis, M., Verteramo, S., & Steiber, A. (2022). The Digital Transformation Of Entrepreneurial Work. *International Journal Of Entrepreneurial Behavior & Research*, 28(5), 1167–1183. <https://doi.org/10.1108/Ijeb-01-2021-0067>
- Domi, S., Capelleras, J.-L., & Musabelliu, B. (2020). Customer Orientation And Sme Performance In Albania: A Case Study Of The Mediating Role Of Innovativeness And Innovation Behavior. *Journal Of Vacation Marketing*, 26(1), 130–146. <https://doi.org/10.1177/1356766719867374>

- Gherghina, Ștefan C., Botezatu, M. A., Hosszu, A., & Simionescu, L. N. (2020). Small And Medium-Sized Enterprises (Smes): The Engine Of Economic Growth Through Investments And Innovation. *Sustainability*, *12*(1), 347. <https://doi.org/10.3390/Su12010347>
- Gomez-Trujillo, A. M., & Gonzalez-Perez, M. A. (2022). Digital Transformation As A Strategy To Reach Sustainability. *Smart And Sustainable Built Environment*, *11*(4), 1137–1162. <https://doi.org/10.1108/Sasbe-01-2021-0011>
- Gunartin, Pratikto, H., Winarno, A., & Restuningdiah, N. (2023). The Role Of Entrepreneurial Competencies: Successful Key Smes A Literature Review. *International Journal Of Professional Business Review*, *8*(7), E01955. <https://doi.org/10.26668/Businessreview/2023.V8i7.1955>
- Haris, N., & Usman, E. (2023). The Effect Of Organizational Culture, Competence And Motivation On The Smes Performance In The Covid-19 Post Pandemic And Digital Era. *Journal Of Industrial Engineering*.
- Hussain, A., Akbar, M., Shahzad, A., Poulova, P., Akbar, A., & Hassan, R. (2022). E-Commerce And Sme Performance: The Moderating Influence Of Entrepreneurial Competencies. *Administrative Sciences*, *12*(1), 13. <https://doi.org/10.3390/Admsci12010013>
- Karimi, S., Ahmadi Malek, F., Yaghoubi Farani, A., & Liobikienė, G. (2023). The Role Of Transformational Leadership In Developing Innovative Work Behaviors: The Mediating Role Of Employees' Psychological Capital. *Sustainability*, *15*(2), 1267. <https://doi.org/10.3390/Su15021267>
- Khan, M. A., Rathore, K., & Sial, M. A. (2020). *Entrepreneurial Orientation And Performance Of Small And Medium Enterprises: Mediating Effect Of Entrepreneurial Competencies. Vol. 14 (2), 508-528.* <https://hdl.handle.net/10419/222912>
- Kornelius, Y., Buntuang, P. C. D., & Bidin, C. R. K. (2020). Rethinking Of Strategy Defending Small And Medium-Sized Enterprises (Smes) During Covid-19 Pandemic: *Proceedings Of The International Conference On Community Development (Iccd 2020)*. International Conference On Community Development (Iccd 2020), Malang, Indonesia. <https://doi.org/10.2991/Assehr.K.201017.173>
- Mejri, R., & Zouaoui, M. (2020). Entrepreneurial Competencies And Growth Of New Micro Small And Medium Businesses. *Open Journal Of Business And Management*, *08*(03), 1151–1163. <https://doi.org/10.4236/Ojbm.2020.83074>
- Mncntrijaya.Com. (2023). *Tingkatkan Rasio Wirausaha Hingga 3,95% Di 2024, Podomoro University Gelar Entrepreneur Hub.* <https://www.mncntrijaya.com/>. <https://www.mncntrijaya.com/news/detail/63015/tingkatkan-rasio-wirausaha-hingga-395-di-2024-podomoro-university-gelar>
- Mustafa Ayobami Raji, Hameedat Bukola Olodo, Timothy Tolulope Oke, Wilhelmina Afua Addy, Onyeka Chrisanctus Ofodile, & Adedoyin Tolulope Oyewole. (2024). The Digital Transformation Of Smes: A Comparative Review Between The Usa And Africa. *International Journal Of Management & Entrepreneurship Research*, *6*(3), 737–751. <https://doi.org/10.51594/Ijmer.V6i3.884>
- Nuryanti, B. L., & Hanifah, A. P. (2022). How Entrepreneurial Competencies Can Effect Business Performance. *The International Journal Of Business Review (The Jobs Review)*, *5*(1), 43–52. <https://doi.org/10.17509/Tjr.V5i1.48044>
- Prakasa, Y., & Putri, Y. R. (2020). Iklim Kewirausahaan Dan Kompetensi Kewirausahaan: Upaya Untuk Meningkatkan Kinerja Usaha (Studi Pada Umkm Batik Tulis Bayat, Klaten). *Jurnal Kewirausahaan Dan Bisnis*, *25*(2), 104. <https://doi.org/10.20961/Jkb.V25i2.45166>
- Sriviboon, C. (2020). *The Impact Of Strategic Human Resource On The Innovation Performance Of Pharmacy Companies In Thailand: Mediating Role Of Innovation Capabilities.* *11*(1).
- Teng, X., Wu, Z., & Yang, F. (2022). Research On The Relationship Between Digital Transformation And Performance Of Smes. *Sustainability*, *14*(10), 6012. <https://doi.org/10.3390/Su14106012>
- Trabucchi, D., & Buganza, T. (2021). Entrepreneurial Dynamics In Two-Sided Platforms: The Influence Of Sides In The Case Of Friendz. *International Journal Of Entrepreneurial Behavior & Research*, *28*(5), 1184–1205. <https://doi.org/10.1108/Ijebr-01-2021-0076>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi 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. (2019). Understanding Digital Transformation: A Review And A Research Agenda. *The Journal Of Strategic Information Systems*, 28(2), 118–144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- W. Adda, H., Chintya Dewi Buntuang, P., & Sondeng, A. (2020). Strategi Mempertahankan Umkm Selama Pandemi Covid-19 Di Kecamatan Bungku Tengah Kabupaten Morowali. *Abdi Dosen : Jurnal Pengabdian Pada Masyarakat*, 4(4), 390. <https://doi.org/10.32832/abdidos.V4i4.717>
- Yuliana, R., Sutomo, M., Nuriasanti, I., & Wirastuti, W. (2024). *Strategi Digital Marketing Melalui Marketplace Pada Umkm Cv. Rapoviaka Simple. Volume. 2, No.2*. <https://doi.org/10.61132/Maeswara.V2i2.707>