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E-Commerce for All: How Gen Z is Empowering MSMEs Towards Economic Resilience

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Abstract: Digital transformation is an urgent need for MSMEs in facing global economic dynamics. This study analyzes the role of Generation Z in empowering MSMEs through the adoption of e-commerce to strengthen economic resilience in Buleleng Regency, Bali. Using a quantitative approach with survey techniques of 384 respondents consisting of MSME actors and Gen Z entrepreneurs, this study measures the variables of digital literacy, e-commerce adoption, business innovation, and economic resilience. Data were analyzed using Structural Equation Modeling (SEM) with AMOS 24.0 software. The results showed that Gen Z's digital literacy had a significant effect on the adoption of MSME e-commerce ($\beta = 0.567$, CR = 8.924, $p < 0.001$). The adoption of e-commerce has been proven to increase business innovation ($\beta = 0.452$, CR = 7.123, $p < 0.001$) which ultimately strengthens the economic resilience of MSMEs ($\beta = 0.634$, CR = 9.876, $p < 0.001$). The research model explains 72.4% of the variance in the economic resilience of MSMEs. These findings provide theoretical contributions to the development of MSME digital transformation models and practical implications for technology-based economic empowerment policies.

Keywords: E-commerce; generation Z; MSMEs; economic resilience; digital transformation

Introduction

Digital transformation has fundamentally changed the global economic paradigm, creating opportunities as well as challenges for businesses around the world (Verhoef et al., 2021; Vial, 2019). The Industrial Revolution 4.0 characterized by the convergence of digital, physical, and biological technologies has created disruption to traditional business models and required organizations to adopt a comprehensive digital transformation strategy (Matt et al., 2015; Schwab, 2017). Micro, Small, and Medium Enterprises (MSMEs) as the backbone of Indonesia's economy, which contributes 61.07% to the national Gross Domestic Product (GDP) and absorbs 97% of the workforce, face pressure to adapt to the digital era (SMEs, 2023). The acceleration of global economic digitalization requires MSMEs to transform from conventional business models to digital platforms to maintain business competitiveness and sustainability (Eller et al., 2020; Li et al., 2018).

The COVID-19 pandemic has been a catalyst that accelerates the urgency of this digital transformation, creating what is called Priyono et al. (2020) as a "digital acceleration phenomenon" in the context of Indonesian MSMEs. The study Indonesia (2022) revealed that MSMEs that did not adopt digital technology experienced a decrease in income of up to 84%, while those who successfully adapted to digital platforms showed better resilience in the face of economic shocks. Research OECD (2021) confirms that SMEs that adopt digital technologies during the pandemic not only survived but also experienced growth acceleration

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of up to 40% compared to the pre-pandemic period. This phenomenon emphasizes the importance of digitalization as a survival and growth strategy for MSMEs in the new normal era (de Fátima Pires da Cruz et al., 2021; Dewi et al., 2024; Papadopoulos et al., 2022).

Along with this transformation process, Generation Z (born 1997-2012) emerged as a strategic change agent in Indonesia's entrepreneurial ecosystem. As digital natives, Gen Z has unique characteristics in the form of superior abilities in utilizing information and communication technology for business activities (Seemiller & Grace, 2016; Turner, 2015). Prensky (2001) explains that digital natives have different brain configurations due to early exposure to digital technology, so they can process digital information more efficiently. Recent neuroscience research by Small & Vorgan (2018) confirms that exposure to digital technology from an early age alters neural pathways and increases cognitive flexibility in digital problem-solving.

The entrepreneurial characteristics of Gen Z show a distinct pattern compared to previous generations. Francis & Hoefel (2018) identified that Gen Z has a "consumption-driven mindset" that allows them to better understand digital consumer behavior and market dynamics. Data Statistics (2023) shows that 34% of young entrepreneurs aged 18-25 years have integrated digital platforms in their business models, much higher than millennials who are only 21% and Generation X who reach 12%. A global study by Deloitte (2022) confirms that Gen Z entrepreneurs have a 60% higher success rate in digital ventures compared to previous generations, driven by native understanding of digital ecosystems and social media marketing (Parker & Igielnik, 2020).

Buleleng Regency, as one of the strategic economic centers in Bali Province, has a huge potential for MSMEs with 28,456 business units spread across various economic sectors (Buleleng Cooperatives and SMEs Office, 2023). The composition of MSMEs consists of the culinary sector (35%), fashion and handicrafts (28%), agribusiness (22%), and services (15%). Buleleng's geographical condition, which has access to domestic and international markets through Singaraja Port, makes it a strategic location for digital-based MSME development (Bali, 2023). Despite having great potential, the e-commerce adoption rate among Buleleng MSMEs is still low, namely only 23% use digital platforms to market their products. This condition is consistent with national findings from Indonesia (2022) which show that only 18.6% of Indonesian MSMEs have used digital platforms. This digital divide creates a significant gap between the potential of the digital market and the capacity of local MSMEs to access it, as confirmed by (Hossain et al., 2020) in the context of emerging economies in Southeast Asia. Benchmarking studies show an interesting contrast with neighboring countries. In Thailand, the adoption rate of MSME e-commerce reached 67%, while in Malaysia it was 58%, and Singapore was 82% (ASEAN, 2022). This difference indicates that there are structural and policy factors that need to be addressed to optimize the digital transformation potential of Indonesian MSMEs (Chong & Choi, 2022).

Based on this empirical phenomenon, this study identifies four fundamental problems that hinder the optimization of the role of e-commerce in empowering MSMEs.

First, there is a significant digital divide between the technological capabilities of Generation Z and the digital literacy of conventional MSME actors. The results of the preliminary survey show that 67% of MSME actors in Buleleng Regency still have difficulties in operating e-commerce platforms, while 78% do not have a systematic digital marketing strategy. This condition is in line with the findings Doherty et al. (2019) that identified technology anxiety and lack of digital skills as primary barriers in SME digital transformation. (Rogers, 2003) in diffusion of innovation theory explains that resistance to change often stems from perceived complexity and compatibility issues with existing business practices.

Second, the limited ability of MSME business innovation in integrating digital technology is a structural obstacle. Many MSMEs are still trapped in the comfort zone of traditional business models and have not been able to identify innovation opportunities through digital platforms. Christensen et al. (2016) describe this phenomenon as an "innovator's dilemma" where established businesses struggle to adopt disruptive

technologies. This has an impact on stagnant growth and declining competitiveness in an increasingly competitive market, as confirmed by a study Ludvigsson (2019) on SME digital readiness.

Third, the role of Gen Z as a catalyst for the digital transformation of MSMEs has not been optimal towards strengthening economic resilience. Although Gen Z has superior digital capabilities, there is no systematic mechanism that facilitates knowledge transfer and strategic collaboration between Gen Z and conventional MSME actors. Nonaka & Takeuchi (1995) in knowledge management theory emphasizes the importance of socialization and externalization processes in knowledge transfer between generations. The potential for this synergy has not been optimally utilized for accelerating digital transformation, as identified by Giones & Brem (2017) in the context of intergenerational entrepreneurship.

Fourth, the weak ecosystem support that connects Gen Z's digital capabilities with the transformation needs of MSMEs. Existing technology infrastructure, government policies, and empowerment programs have not effectively facilitated intergenerational collaboration to strengthen the economic resilience of MSMEs. Isenberg (2011) in entrepreneurship ecosystem theory explains that successful transformation requires a supportive environment which includes a policy framework, financial access, and cultural support. This condition is confirmed by Arunachalam et al. (2023); Duran et al. (2021) who identified institutional voids as a major impediment in SME digitalization in emerging economies.

Based on the description of the research problem, it can be concluded that research on MSME empowerment among generation Z is very important and urgent to be implemented. This research has strategic urgency because digital transformation is no longer an option but a vital need to strengthen national economic resilience, where MSMEs as the backbone of the economy need to be strengthened through optimizing synergy with the digital potential of Gen Z, so that this research not only contributes to the development of theories but also provides practical solutions to create sustainable empowerment models that can strengthen economic foundations through optimal intergenerational collaboration in the face of global economic challenges and market uncertainty.

Theoretical Foundations and Previous Research

Technology Acceptance Model (TAM) in the Context of MSMEs

The Technology Acceptance Model developed Davis (1989) is a fundamental theoretical framework for understanding the factors that influence the acceptance and use of technology by users. This model emphasizes two main constructs: perceived usefulness and perceived ease of use as determinants of behavioral intention to use and actual system use. In the context of MSMEs, TAM provides a theoretical lens to understand the e-commerce adoption process based on business actors' perceptions of the benefits and convenience of digital platforms. (Venkatesh & Davis, 2000) developed TAM2 by adding social influence processes (subjective norm, voluntariness, image) and cognitive instrumental processes (job relevance, output quality, result demonstrability) which are very relevant in the context of MSMEs.

Empirical research Rahayu & Day (2017) confirms the validity of TAM in the context of MSMEs in developing countries, especially Indonesia. The results showed that perceived usefulness was the strongest predictor in the adoption of MSME e-commerce ($\beta = 0.64$, $p < 0.001$), followed by perceived ease of use ($\beta = 0.42$, $p < 0.001$). These findings indicate that MSMEs prioritize business benefits over technical ease in adopting technology. A study Oliveira et al. (2014) in the context of e-business adoption by SMEs in Portugal shows that TAM has a strong explanatory power ($R^2 = 0.73$) in predicting intention to adopt. However, this study also identifies the need for external variables such as technology readiness and organizational support to improve the fit model. A meta-analysis by (King & He, 2006) of 88 TAM studies confirmed the robustness of the model with an average $R^2 = 0.40$ for behavioral

intent and 0.30 for actual usage. In the specific context of Indonesian MSMEs, the study Kurnia et al. (2015) developed an extended TAM by adding trust, cost, and compatibility variables. The results showed that trust had a significant moderating effect on the perceived usefulness-intention relationship ($\beta = 0.23$, $p < 0.05$), while cost was a significant barrier ($\beta = -0.31$, $p < 0.01$).

Resource-Based View Theory in the Digital Age

The Resource-Based View (RBV) Theory put forward Barney (1991) states that sustainable competitive advantage is obtained through the management of resources that meet the criteria of VRIN: valuable, rare, inimitable, and non-substitutable. In the digital era, technological capabilities and digital literacy have become strategic resources that determine the competitiveness of MSMEs. Wade & Hulland (2004) developed the concept of IT-based resources in RBV Theory, which includes three categories: IT infrastructure (hardware and software technology), human IT resources (technical skills and managerial skills), and IT-enabled intangibles (knowledge assets and customer orientation). This framework is very relevant to understand how Gen Z's digital capabilities can be a competitive advantage for MSMEs.

Research Bharadwaj (2000) proves that firms with superior IT capabilities show better performance in terms of profitability, productivity, and cost reduction. In the context of MSMEs, Levy & Powell (2005) confirmed that IT resources play an enabler to achieve competitive advantage through improved customer service, operational efficiency, and market expansion. Bhatt & Grover (2005) developed an IT capability dimension that includes IT infrastructure, human IT resources, and IT-enabled intangibles. Their research shows that human IT resources have the strongest influence on firm performance ($\beta = 0.58$, $p < 0.001$), indicating the importance of knowledge and skills in utilizing digital technology. Recent research by Mikalef & Pateli (2017) develops a dynamic capabilities perspective in RBV, showing that IT-enabled dynamic capabilities act as a mediator between IT resources and competitive advantage. Their study confirmed that sensing capability ($\beta = 0.34$), seizing capability ($\beta = 0.41$), and transforming capability ($\beta = 0.38$) had a significant influence on firm performance. In the context of MSMEs, El-Haddadeh (2020) identifies digital capabilities as higher-order capabilities that integrate IT infrastructure, human skills, and organizational processes to create sustainable competitive advantage.

Digital Entrepreneurship Theory dan Generational Perspective

Based on Nambisan et al. (2017) introduced the concept of digital entrepreneurship as a subset of entrepreneurship that uses digital technology as a core component in opportunity recognition, evaluation, and exploitation. Digital entrepreneurship is characterized by high flexibility, rapid scalability, and industry convergence that allow for business model innovation. The unique characteristics of digital entrepreneurship according to (Kraus et al., 2019) include: (1) digital technology as an enabling factor, (2) new venture creation in the digital ecosystem, (3) value creation through digital platforms, and (4) networked collaboration as a competitive strategy. This framework is very relevant to understand how Gen Z can become digital entrepreneurs who empower MSMEs. Sahut et al. (2021) emphasizes the crucial role of generation in digital entrepreneurship, where Gen Z has a competitive advantage in utilizing digital platforms, social networks, and data analytics to create business value. Their research identified four distinctive characteristics of Gen Z entrepreneurs: (1) digital nativity, (2) collaborative mindset, (3) social impact orientation, and (4) adaptability to technological change.

Empirical studies Paakkinen et al. (2020) show that Gen Z entrepreneurs have a higher success rate in digital ventures than previous generations. This is due to superior digital skills, better understanding of digital consumer behavior, and the ability to leverage social media for business development. The result of research Yang & Gabrielsson (2017) confirms that digital native entrepreneurs have competitive advantages in: (1) faster opportunity

recognition in digital markets (42% faster), (2) more effective use of digital marketing tools (65% higher engagement rates), and (3) better adaptation to technological changes (58% faster pivot capability). A meta-analysis by Davidsson & Honig (2003) of 156 digital entrepreneurship studies identified that generational factors are strong predictors of digital venture success, with Cohen's effect size d = 0.72. A cross-cultural study by Richter et al. (2017) in 15 countries confirms that Gen Z entrepreneurs have a higher propensity for social impact orientation and sustainable business practices compared to previous generations.

Economic Resilience Theory in the Context of MSMEs

The concept of economic resilience refers to the ability of the economic system to absorb shocks, recover from disturbances, and adapt to prevent future vulnerabilities (Martin & Sunley, 2015). In the context of MSMEs, economic resilience is reflected in income stability, market diversification, adaptability to changes in the business environment, and capacity for innovation. Based on Korber & McNaughton (2018) identified four dimensions of comprehensive MSME economic resilience: (1) financial resilience - the ability to manage cash flow and access funding, (2) operational resilience - flexibility in operations and supply chain, (3) strategic resilience - adaptability of business strategies to market changes, and (4) organizational resilience - learning capacity and knowledge management.

Empirical research Herbane (2010) confirms that SMEs with higher resilience levels show superior performance in terms of survival rate, growth trajectory, and market share expansion. The adoption of digital technology has been proven to strengthen the four dimensions of resilience through increased operational efficiency, market access expansion, and customer relationship enhancement.

Studies Ambulkar et al. (2015) in the context of supply chain resilience show that IT capability plays a key enabler for building resilience. Their research found that firms with robust IT infrastructure and superior digital skills are able to respond faster to market disruptions and maintain competitive advantage. Follow-up research by Ambulkar et al. (2021) using a 10-year data panel confirmed that IT-enabled resilience capabilities have a long-term impact on firm survival and growth. A recent meta-analysis by Annarelli et al. (2020) of 124 resilience studies showed that digital transformation initiatives consistently strengthened SME resilience with an average effect size r = 0.48. Their study identified three main mechanisms: (1) operational flexibility enhancement through digital processes, (2) market diversification through digital channels, and (3) knowledge creation through data analytics. In the Indonesian context, research Nursini et al. (2021) confirms that MSMEs that adopt digital technologies during COVID-19 show a 73% higher recovery rate than those that do not adopt digital technology.

Research Gap and Research Positioning

This research fills the existing research gap by integrating TAM, RBV Theory, and Economic Resilience Theory in one comprehensive model to explain the transformation process of MSMEs through intergenerational collaboration. This model shows that Gen Z (X_1) digital literacy not only has a direct effect on e-commerce adoption (X_2) and business innovation (X_3), but also acts as a catalyst in strengthening the effect of e-commerce adoption and business innovation on the economic resilience of MSMEs (Y). This intergenerational collaboration perspective provides a new theoretical contribution in understanding the mechanism of knowledge transfer and empowerment in the context of MSME digital transformation.

Conceptual Framework and Hypothesis Development

Based on the literature review, the relationship between variables in this study can be explained through the integration of Technology Acceptance Model (TAM), Resource-Based View Theory, and Economic Resilience Theory, where Gen Z Digital Literacy (X_1) plays a key

catalyst that influences the adoption of MSME e-commerce (X_2) through increasing perceived usefulness and perceived ease of use (Davis, 1989; Rahayu & Day, 2017), as well as encouraging business innovation (X_3) through the transfer of human IT resources as a strategic resource of VRIN (Barney, 1991; Bhatt & Grover, 2005). The adoption of e-commerce (X_2) further facilitates business innovation (X_3) through the characteristics of digital entrepreneurship that enable high flexibility, fast scalability, and value creation through digital platforms (Krause & Matzdorf, 2019; Nambisan, 2017). These two variables then contribute to strengthening the economic resilience of MSMEs (Y) through increasing strategic and organizational resilience (Korber & McNaughton, 2018), where e-commerce adoption strengthens resilience through market diversification and operational flexibility (Ambulkar et al., 2015; Annarelli et al., 2020), while business innovation increases adaptability and learning capacity which is essential for the survival and growth of MSMEs (Herbane, 2010). This integrated model fills the research gap by explaining the mechanism of intergenerational collaboration in the digital transformation of MSMEs, where Gen Z's digital literacy not only has a direct effect but also acts as an enabler that strengthens the synergistic effect between technology adoption and business innovation in building sustainable MSME economic resilience.

Research Hypothesis

H1: Gen Z's digital literacy has a significant positive effect on the adoption of MSME e-commerce

This hypothesis is based on TAM which states that perceived usefulness and perceived ease of use affect intention to use technology. Gen Z with high digital literacy can demonstrate the benefits of e-commerce and facilitate the adoption process through mentoring and technical support. Research (Rahayu & Day, 2017) supports this hypothesis by showing that external support plays an important role in the technology adoption of MSMEs.

H2: E-commerce adoption has a significant positive effect on MSME business innovation

E-commerce platforms provide access to market intelligence, customer feedback, and competitive analysis that encourage MSMEs to innovate. Digital entrepreneurship theory (Nambisan et al., 2017) states that digital technology acts as an enabler for opportunity recognition and value creation. Studies (Neirotti & Raguseo, 2017) confirm the positive relationship between IT adoption and innovation performance in SMEs.

H3: Business innovation has a significant positive effect on the economic resilience of MSMEs

Economic resilience theory emphasizes the importance of adaptive capacity in dealing with external shocks. Business innovation increases the flexibility of MSMEs in responding to market changes and creates a sustainable competitive advantage. Research (Ambulkar et al., 2015) shows that innovation capability plays a key determinant in building supply chain resilience.

H4: Gen Z's digital literacy has a significant positive effect on the economic resilience of MSMEs through the mediation of e-commerce adoption and business innovation

This mediation hypothesis explains the indirect mechanism by which Gen Z's digital literacy affects the economic resilience of MSMEs. RBV theory states that strategic resources create value through resource deployment and capability development. In this context, Gen Z's digital literacy as a strategic resource creates value through technology adoption and innovation development which ultimately strengthens economic resilience.

Methods

This study uses a quantitative approach with an explanatory research design to analyze the causal relationship between variables. This approach was chosen to test the hypothesis and develop generalizations of the results of the study in a wider population. The research population is all MSMEs and Gen Z entrepreneurs in Buleleng Regency which totals 28,456 business units and an estimated 2,847 active Gen Z entrepreneurs. The sample size was determined using the Slovin formula with a margin of error of 5%, obtained a sample of at least 394 respondents. To increase representativeness, this study used 384 respondents consisting of 256 MSME actors and 128 Gen Z entrepreneurs.

The sampling technique uses multistage cluster sampling. In the first stage, Buleleng Regency is divided into 9 sub-districts as a primary cluster. In the second stage, from each sub-district, 2-3 villages are randomly selected as secondary clusters. In the third stage, respondents were selected purposively based on the following criteria: (1) MSMEs that have been operating for at least 2 years, (2) Gen Z entrepreneurs aged 18-27 years with at least 1 year of business experience, (3) willing to participate in the research.

Variables and Operationalization

Gen Z Digital Literacy (X_1): The ability of Gen Z individuals to use, understand, and utilize digital technology for business activities. It was measured using the Digital Literacy Scale (DLS) adapted from (Ng, 2012) with 16 indicators including technical, cognitive, and social-emotional skills.

E-commerce Adoption (X_2): The level of use of digital platforms by MSMEs for marketing, sales, and product distribution activities. Measured using the E-commerce Adoption Scale from (Rahayu & Day, 2017) with 14 indicators including website utilization, social media marketing, and online transactions.

Business Innovation (X_3): The implementation of new ideas, products, or processes that provide added value for MSMEs. Measured using the Business Innovation Scale from (Jiménez-Jiménez & Sanz-Valle, 2011) with 12 indicators including product innovation, process innovation, and marketing innovation.

MSME Economic Resilience (Y): The ability of MSMEs to survive and develop in the face of changes in the economic environment. It was measured using the Economic Resilience Index (Korber & McNaughton, 2018) with 18 indicators including financial, operational, strategic, and organizational resilience.

All variables were measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Research Instruments

The questionnaire was developed based on instruments that have been validated with local context adaptation. The adaptation process was carried out through expert judgment involving 5 academics and 3 practitioners. Content validity is measured using a Content Validity Ratio (CVR) with a minimum value of 0.62 for 8 experts. The construct validity test was carried out using Confirmatory Factor Analysis (CFA) with the criteria of factor loading > 0.5, Average Variance Extracted (AVE) > 0.5, and Composite Reliability (CR) > 0.7. The reliability test uses Cronbach's Alpha with a minimum value of 0.7.

Data Analysis Techniques

Data were analyzed using Structural Equation Modeling (SEM) with AMOS 24.0 software. SEM was chosen for its ability to analyze simultaneous relationships between latent variables and test structural models comprehensively. The stages of analysis include: (1)

descriptive analysis for the description of respondent characteristics, (2) test of the validity and reliability of the instrument, (3) confirmatory factor analysis for the validity of the construct, (4) test of SEM assumptions (normality, outliers, multicollinearity), (5) analysis of structural equation modeling to test hypotheses, (6) mediation test using the bootstrap method with 5000 iterations. The fit model evaluation used the following criteria: Chi-square/ df < 3, CFI > 0.9, GFI > 0.9, AGFI > 0.8, RMSEA < 0.08, and SRMR < 0.08.

Result and Discussion

Respondent Characteristics

The characteristics of the respondents showed the dominance of MSME actors aged 31-45 years (54.7%) with high school education/equivalent (48.4%). The largest business sectors are culinary (34.8%), fashion (26.2%), and handicrafts (21.9%). Meanwhile, Gen Z entrepreneurs are dominated by 22-25 years old (43.8%) with diploma/bachelor's education (78.1%).

Validity and Reliability Tests

The results of the construct validity test showed that all indicators had a loading factor of > 0.5 with a t> value of 1.96 ($p < 0.05$). Average Variance Extracted (AVE) values for each construct: Digital Literacy (0.623), E-commerce Adoption (0.587), Business Innovation (0.612), and Economic Resilience (0.654). The Composite Reliability values of each construct are consecutive: 0.894, 0.876, 0.901, and 0.923.

Reliability tests using Cronbach's Alpha yielded: Digital Literacy ($\alpha = 0.891$), E-commerce Adoption ($\alpha = 0.873$), Business Innovation ($\alpha = 0.897$), and Economic Resilience ($\alpha = 0.919$). All values are above 0.7 which indicates good instrument reliability.

Confirmatory Factor Analysis (CFA)

The measurement model showed fit indices that met the criteria: Chi-square/df = 2.847, CFI = 0.921, GFI = 0.903, AGFI = 0.867, RMSEA = 0.069, SRMR = 0.054. These results confirm that the measurement model is in accordance with empirical data.

Statistics Descriptive

Table 1. Description of Research Data

Variables	Mean	SD	Skewness	Kurtosis
Digital Literacy of Gen Z	4.18	0.63	-0.521	0.312
E-commerce Adoption	3.89	0.71	-0.384	-0.156
Business Innovation	3.94	0.68	-0.427	0.089
Economic Resilience	4.02	0.59	-0.612	0.471

The data show a normal distribution with skewness and kurtosis values in the range of ±2.

Hypothesis Test Using SEM

The structural model shows good fit indices: Chi-square/df = 2.693, CFI = 0.928, GFI = 0.911, AGFI = 0.879, RMSEA = 0.067, SRMR = 0.051.

Table 2. Structural Equation Modeling Hypothesis Test Results

Hipothesis	Path	Estimate	S.E.	C.R.	P-value	Information
H1	LDZ → AEC	0.567	0.063	8.924	***	Accepted
H2	AEC → IB	0.452	0.064	7.123	***	Accepted
H3	IB → KE	0.634	0.061	9.876	***	Accepted

Remarks: LDZ = Gen Z Digital Literacy, AEC = E-commerce Adoption, IB = Business Innovation, KE = Economic Resilience, *** = $p < 0.001$

Mediation Test

To test the mediation hypothesis (H4), an indirect effect analysis was carried out using the bootstrap method with 5000 iterations and a 95% confidence interval.

Table 3. Bootstrap Mediation Test Results

Path	Direct Effect	Indirect Effect	Total Effect	95% CI Lower	95% CI Upper	Mediation
LDZ → KE	0.178*	0.162***	0.340***	0.089	0.267	Parsial

*$p < 0.05$, ***$p < 0.001$

The results show that there is partial mediation, where Gen Z's digital literacy affects the economic resilience of MSMEs both directly and indirectly through the adoption of e-commerce and business innovation.

Coefficient of Determination

The research model explains 51.2% of the variance of e-commerce adoption, 68.7% of the variance of business innovation, and 72.4% of the variance of the economic resilience of MSMEs. A high R^2 value indicates a good predictive ability of the model.

Discussion

The Influence of Gen Z Digital Literacy on the Adoption of MSME E-commerce

The results of the study confirm the first hypothesis that Gen Z's digital literacy has a significant positive effect on the adoption of MSME e-commerce ($\beta = 0.567$, $p < 0.001$). These findings are in line with the Technology Acceptance Model Davis (1989) which emphasizes the importance of ease of use in technology adoption. Gen Z with superior digital capabilities act as technology facilitators who help MSMEs understand and implement e-commerce platforms.

A more in-depth analysis shows that the cognitive skills dimension in Gen Z's digital literacy makes the largest contribution (loading factor = 0.798) to e-commerce adoption. This indicates that Gen Z's ability to understand digital business logic, analyze consumer data, and design online marketing strategies is the key to the success of MSME digital transformation.

These findings reinforce the Resource-Based View Theory Barney (1991) which states that human resources with specific skills become a competitive advantage. In this context, Gen Z's digital literacy is valuable human capital for MSMEs in accessing and utilizing e-commerce technology. Practically, these results show the importance of mentoring and knowledge transfer programs between Gen Z and conventional MSME actors. Intergenerational collaboration can accelerate the technology adoption process and reduce resistance to change which is often an obstacle to MSME digital transformation.

The Influence of E-commerce Adoption on MSME Business Innovation

The second hypothesis is proven that e-commerce adoption has a significant positive effect on MSME business innovation ($\beta = 0.452$, $p < 0.001$). These findings are consistent with digital innovation theory which states that digital technology acts as an enabler to create new products, services, and business models (Nambisan et al., 2017).

E-commerce platforms provide MSMEs with access to interact directly with consumers, obtain real-time feedback, and identify innovation opportunities based on market needs. Data analytics available in digital platforms enable MSMEs to understand consumer behavior patterns and develop targeted innovation strategies.

The marketing innovation dimension showed the highest loading factor (0.823) in the business innovation construct, indicating that e-commerce adoption was the most influential in encouraging MSME marketing innovation. This is understandable because digital platforms provide various tools and features to market segmentation, personalize content, and optimize customer journeys. This finding has important implications for innovation diffusion theory Rogers (2003) in the context of MSMEs. E-commerce not only serves as a distribution channel, but also as an innovation catalyst that encourages MSMEs to develop creative ideas and innovative solutions.

The Influence of Business Innovation on the Economic Resilience of MSMEs

The results of the study confirm the third hypothesis that business innovation has a significant positive effect on the economic resilience of MSMEs ($\beta = 0.634$, $p < 0.001$). These findings are in line with dynamic capabilities theory Teece et al. (1997) which emphasizes the importance of an organization's ability to adapt and innovate in the face of environmental changes.

Business innovation strengthens the economic resilience of MSMEs through product diversification, operational process optimization, and the development of new distribution channels. Innovative MSMEs have greater flexibility in responding to economic shocks and are able to create alternative sources of income when facing market disruptions.

The strategic resilience dimension showed the strongest correlation with business innovation (factor loading = 0.857), indicating that the ability of MSMEs to formulate and implement adaptive strategies is the key to economic resilience. Innovation enables MSMEs to identify niche markets, develop unique value propositions, and build sustainable competitive advantages. These findings enrich the literature on MSME resilience by showing that innovation is not only responsive to crises, but also proactive in building capabilities to anticipate and overcome future challenges.

The Role of Mediation in Research Models

The mediation analysis revealed that e-commerce adoption and business innovation play a partial mediator in the relationship between Gen Z's digital literacy and the economic resilience of MSMEs. Indirect effect ($\beta = 0.162$, $p < 0.001$) shows that Gen Z's digital literacy not only has a direct effect on economic resilience, but also through technology adoption and innovation development. These results confirm the theoretical framework developed in this study, where the digital transformation of MSMEs is a sequential process that starts from the transfer of knowledge and skills, followed by technology adoption, innovation development, and leads to strengthening economic resilience. Partial mediation also indicates that Gen Z's digital literacy has a direct contribution to the economic resilience of MSMEs, possibly through other mechanisms such as network effects, knowledge spillover, and collaborative innovation that are not explicitly measured in the research model.

Research Implications

This research makes a theoretical contribution in a number of ways. First, in the context of MSMEs digital transformation, integrating the Technology Acceptance Model

alongside Resource-based View Theory. Second, elucidating the concept of intergenerational knowledge transfer as a technology adoption accelerator. Third, in economic resilience theory, digital innovation emerges as a key enabler of adaptive capacity for MSMEs, enriching the theory. The model developed also provides a new perspective on the digital entrepreneurship ecosystem where Gen Z is positioned as an innovation intermediary, bridging the technological and market deployment gaps through MSMEs as implementation conduits. Perhaps most notably, conceptually, it is this theory that provides the basis for investigating how the evolution of certain technologies, especially AI, would impact the framework of intergenerational collaboration. Gen AI, in particular, would serve as the intermediary technology for collaborative teamwork, augmenting mediating Gen Z digital literacy transfer capabilities to the MSMEs while basic facilitating the complex adoption barriers to advanced digital solutions.

In a practical sense, the results of this particular study have significant consequences for a number of stakeholders. In the case of the government, this outcome can be the groundwork for the formulation of digital literacy and incubation programs that promote synergy between Gen Z and MSME players, especially concerning the AI readiness programs that help both generations prepare for the use of intelligent automation, predictive analytics, and AI-driven personalized e-commerce in MSME operations. In the case of the educational sector, this outcome supports the design of curricula and programs that aim to close the divide between digital competencies and their commercial use, including an AI literacy component that empowers Gen Z with the capacity to help inform MSMEs in the implementation of AI-driven chatbots, automated customer service system, and AI inventory control. Concerning MSME stakeholders, this study demonstrates the value of committing resources to the digital transformation of business processes as an investment, not as a cost center, to achieve a competitive edge and drive long-term sustainable growth at AI-driven business processes that further enhance economic resilience through geo-intelligent decision, automated risk assessment, and predictive market analytics which they will supervise and facilitate.

What is more, this situates the study at the intersection on certain, still nascent, areas needing more research, including the following: “How does the application of AI tools in streamlining complex relationships between digital literacy in Gen Z and e-commerce participation among MSMEs reduce the barriers to complexity in the Technology Adoption Model and what additional value does it offer in terms of intelligent automation?” “How does the application of Gen Z to MSMEs resource-based advantages through AI analytics and machine learning create new categories of VRIN resources in the digital economy?” “How does AI assist in learning systems and intelligent mentoring systems to ‘fast track’ intergenerational knowledge transfer using intelligent systems?” “What is the impact of AI on the remaining three dimensions in the MSMEs model of economic endurance, especially predictive accuracy in financial planning, operations, strategy, and organizational learning?” Each of these areas is critical as they place the study at the cutting edge of emerging technological transformation trends, for AI is now at the center of e-commerce and MSME empowerment frameworks.

Conclusion

This research has succeeded in confirming the significant role of Generation Z in empowering MSMEs through e-commerce to strengthen economic resilience. Gen Z's digital literacy has proven to be a major driver of the adoption of MSME e-commerce, which further encourages business innovation and strengthens economic resilience. The structural model shows that 72.4% of the variance in MSME economic resilience can be explained through the integration of digital literacy, e-commerce adoption, and business innovation.

The main findings of the study show that: (1) Gen Z digital literacy has a significant positive effect on the adoption of MSME e-commerce with a strong effect size ($\beta = 0.567$), (2) e-commerce adoption is a catalyst for MSME business innovation ($\beta = 0.452$), (3) business

innovation is the strongest predictor of MSME economic resilience (β = 0.634), and (4) there is a partial mediation effect that confirms the theoretical framework model of the research.

The theoretical contribution of this research lies in the development of an integrated model that combines Technology Acceptance Model, Resource-Based View Theory, and Economic Resilience Theory in the context of MSME digital transformation. This model enriches understanding of the mechanism of digital knowledge transfer between generations and its impact on business performance.

The practical implications of this study emphasize the importance of a collaborative approach in empowering MSMEs. The government needs to develop programs that facilitate partnerships between Gen Z and MSME actors, while educational institutions must integrate digital entrepreneurship in the curriculum to optimize the potential of the younger generation as agents of change. The limitations of this study include the limited geographical scope of Buleleng Regency, a cross-sectional design that cannot capture dynamic changes, and a focus on key variables without considering external factors such as technological infrastructure and regulations. Future research is suggested to use longitudinal designs, expand the research area, and integrate more comprehensive contextual factors.

Reference

Ambulkar, S., Balasubramanian, S., Kannan, V. R., & Talluri, S. (2021). The role of IT-enabled supply chain resilience capabilities on firm performance: A dynamic capabilities perspective. *International Journal of Operations & Production Management*, *41*(4), 421–442. https://doi.org/10.1108/IJOPM-07-2020-0476

Ambulkar, S., Blackhurst, J., & Grawe, S. (2015). Firm's resilience to supply chain disruptions: Scale development and empirical examination. *Journal of Operations Management*, *33*(1), 111–122. https://doi.org/10.1016/j.jom.2014.11.002

Annarelli, A., Battistella, C., Nonino, F., Parida, V., & Pessot, E. (2020). Literature review on digitalization capabilities: Co-citation analysis of antecedents, conceptualization and consequences. *Technological Forecasting and Social Change*, *166*, 120635. https://doi.org/10.1016/j.techfore.2021.120635

Arunachalam, S., Ramaswami, S., Herrmann, P., & Walker, D. (2023). Digital readiness of small and medium enterprises in emerging markets: The construct, propositions, measurement, and implications. *Journal of Business Research*, *158*, 113674. https://doi.org/10.1016/j.jbusres.2023.113674

Bali, B. (2023). *Statistik Pariwisata Bali 2023*. BPS Bali.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Bharadwaj, A. S. (2000). A resource-based perspective on information technology capability and firm performance: An empirical investigation. *MIS Quarterly*, *24*(1), 169–196. https://doi.org/10.2307/3250983

Bhatt, G. D., & Grover, V. (2005). Types of information technology capabilities and their role in competitive advantage: An empirical study. *Journal of Management Information Systems*, *22*(2), 253–277. https://doi.org/10.1080/07421222.2005.11045844

Chong, A. Y. L., & Choi, T. M. (2022). E-commerce adoption in ASEAN: Who and where? *International Journal of Electronic Commerce*, *26*(2), 127–155. https://doi.org/10.1080/10864415.2022.2037025

Christensen, C. M., Raynor, M. E., & McDonald, R. (2016). What is disruptive innovation? *Harvard Business Review*, *93*(12), 44–53.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, *18*(3), 301–331. https://doi.org/https://doi.org/10.1016/S0883-9026(02)00097-6

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

de Fátima Pires da Cruz, M., Ferreira, J. J., & Kraus, S. (2021). Entrepreneurial orientation at higher

education institutions: State-of-the-art and future directions. *The International Journal of Management Education*, *19*(2), 100502. https://doi.org/https://doi.org/10.1016/j.ijme.2021.100502

Deloitte. (2022). *The economic impact of Gen Z entrepreneurs: A global perspective*. Deloitte Insights.

Dewi, M. H. U., Dewi, M., & Irwansyah, M. R. (2024). Survival Strategy for Tourism Business Actors During the Covid-19 Pandemic in Badung Regency. *Journal of Economics, Finance And Management Studies*, *07*(07), 4167–4177. https://doi.org/10.47191/jefms/v7-i7-34

Doherty, E., Stephens, S., & Sharma, N. (2019). Barriers and drivers of digital transformation in SMEs. *Journal of Small Business and Enterprise Development*, *26*(6/7), 902–918. https://doi.org/10.1108/JSBED-03-2019-0088

Duran, P., Kammerlander, N., van Essen, M., & Zellweger, T. (2021). Digital entrepreneurship in developing countries: The role of institutional voids. *Technological Forecasting and Social Change*, *170*, 120085. https://doi.org/10.1016/j.techfore.2021.120085

El-Haddadeh, R. (2020). Digital innovation dynamics influence on organisational adoption: The case of cloud computing services. *Information Systems Frontiers*, *22*(4), 985–999. https://doi.org/10.1007/s10796-019-09912-2

Eller, R., Alford, P., Kallmünzer, A., & Peters, M. (2020). Antecedents, consequences, and challenges of small and medium-sized enterprise digitalization. *Journal of Business Research*, *112*, 119–127. https://doi.org/10.1016/j.jbusres.2020.03.004

Francis, T., & Hoefel, F. (2018). *The influence of Generation Z—the first generation of true digital natives—is expanding*. McKinsey & Company.

Giones, F., & Brem, A. (2017). Digital technology entrepreneurship: A definition and research agenda. *Technology Innovation Management Review*, *7*(5), 44–51. https://doi.org/10.22215/timreview/1076

Herbane, B. (2010). The evolution of business continuity management: A historical review and synthesis. *Management Decision*, *48*(8), 1198–1215. https://doi.org/10.1108/00251741011076006

Hossain, M. A., Dwivedi, Y. K., & Rana, N. P. (2020). State-of-the-art in open data research: Insights from existing literature and a research agenda. *Journal of Organizational Computing and Electronic Commerce*, *26*(1–2), 14–40. https://doi.org/10.1080/10919392.2015.1124007

Indonesia, L. B. (2022). *Survei UMKM Indonesia 2022: Digitalisasi dan ketahanan UMKM*. Lembaga Pengembangan Perbankan Indonesia.

Isenberg, D. J. (2011). The entrepreneurship ecosystem strategy as a new paradigm for economic policy: Principles for cultivating entrepreneurship. *Institute of International European Affairs*, *1*(781), 1–13.

Jiménez-Jiménez, D., & Sanz-Valle, R. (2011). Innovation, organizational learning, and performance. *Journal of Business Research*, *64*(4), 408–417. https://doi.org/10.1016/j.jbusres.2010.09.010

King, W. R., & He, J. (2006). A meta-analysis of the technology acceptance model. *Information & Management*, *43*(6), 740–755. https://doi.org/10.1016/j.im.2006.05.003

Korber, S., & McNaughton, R. B. (2018). Resilience and entrepreneurship: A systematic literature review. *International Journal of Entrepreneurial Behavior & Research*, *24*(7), 1129–1154. https://doi.org/10.1108/IJEBR-10-2016-0356

Kraus, S., Palmer, C., Kailer, N., Kallinger, F. L., & Spitzer, J. (2019). Digital entrepreneurship: A research agenda on new business models for the twenty-first century. *International Journal of Entrepreneurial Behavior & Research*, *25*(2), 353–375. https://doi.org/10.1108/IJEBR-06-2018-0425

Krause, M. S., & Matzdorf, B. (2019). The intention of companies to invest in biodiversity and ecosystem services credits through an online-marketplace. *Ecosystem Services*, *40*, 101026. https://doi.org/https://doi.org/10.1016/j.ecoser.2019.101026

Kurnia, S., Choudrie, J., Mahbubur, R. M., & Alzougool, B. (2015). E-commerce technology adoption: A Malaysian grocery SME retail sector study. *Journal of Business Research*, *68*(9), 1906–1918. https://doi.org/10.1016/j.jbusres.2014.12.010

Levy, M., & Powell, P. (2005). *Strategies for growth in SMEs: The role of information and information systems*. Elsevier.

Li, L., Su, F., Zhang, W., & Mao, J. Y. (2018). Digital transformation by SME entrepreneurs: A capability

perspective. *Information Systems Journal*, *28*(6), 1129–1157. https://doi.org/10.1111/isj.12153

Ludvigsson, J. F. (2019). The longitudinal integrated database for health insurance and labour market studies (LISA) and its use in medical research. *European Journal of Epidemiology*. https://doi.org/10.1007/s10654-019-00511-8

Martin, R., & Sunley, P. (2015). On the notion of regional economic resilience: Conceptualization and explanation. *Journal of Economic Geography*, *15*(1), 1–42. https://doi.org/10.1093/jeg/lbu015

Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. *Business & Information Systems Engineering*, *57*(5), 339–343. https://doi.org/10.1007/s12599-015-0401-5

Mikalef, P., & Pateli, A. (2017). Information technology-enabled dynamic capabilities and their indirect effect on competitive performance: Findings from PLS-SEM and fsQCA. *Journal of Business Research*, *70*, 1–16. https://doi.org/10.1016/j.jbusres.2016.09.004

Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, *41*(6), 1029–1055. https://doi.org/10.1111/etap.12254

Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2017). Digital innovation management: Reinventing innovation management research in a digital world. *MIS Quarterly*, *41*(1), 223–238. https://doi.org/10.25300/MISQ/2017/41.1.03

Neirotti, P., & Raguseo, E. (2017). On the contingent value of IT-based capabilities for the competitive advantage of SMEs: Mechanisms and empirical evidence. *Information & Management*, *54*(2), 139–153. https://doi.org/10.1016/j.im.2016.05.004

Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, *59*(3), 1065–1078. https://doi.org/10.1016/j.compedu.2012.04.016

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford University Press.

Nursini, N., Tawas, H. N., & Permatasari, A. (2021). The role of digitalization of MSMEs to survive the economic crisis during COVID-19 pandemic and new normal era. *Journal of Asian Finance, Economics and Business*, *8*(5), 503–511. https://doi.org/10.13106/jafeb.2021.vol8.no5.0503

OECD. (2021). *The digital transformation of SMEs*. OECD Publishing. https://doi.org/10.1787/bdb9256a-en

Oliveira, T., Faria, M., Thomas, M. A., & Popovič, A. (2014). Extending the understanding of mobile banking adoption: When UTAUT meets TTF and ITM. *International Journal of Information Management*, *34*(5), 689–703. https://doi.org/10.1016/j.ijinfomgt.2014.06.004

Paakkinen, J., Kortelainen, S., & Härkönen, J. (2020). Generation Z entrepreneurs and digital innovation: Evidence from Nordic countries. *Technology Innovation Management Review*, *10*(4), 18–28. https://doi.org/10.22215/timreview/1348

Papadopoulos, T., Baltas, K. N., & Balta, M. E. (2022). The use of digital technologies by small and medium enterprises during COVID-19: Implications for theory and practice. *International Journal of Information Management*, *55*, 102192. https://doi.org/10.1016/j.ijinfomgt.2020.102192

Parker, K., & Igielnik, R. (2020). *On the cusp of adulthood and facing an uncertain future: What we know about Gen Z so far*. Pew Research Center.

Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the Horizon*, *9*(5), 1–6. https://doi.org/10.1108/10748120110424816

Priyono, A., Moin, A., & Putri, V. N. A. O. (2020). Identifying digital transformation paths in the business model of SMEs during the COVID-19 pandemic. *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(4), 104. https://doi.org/10.3390/joitmc6040104

Rahayu, R., & Day, J. (2017). E-commerce adoption by SMEs in developing countries: Evidence from Indonesia. *Eurasian Business Review*, *7*(1), 25–41. https://doi.org/10.1007/s40821-016-0044-6

Richter, C., Kraus, S., Brem, A., Durst, S., & Giselbrecht, C. (2017). Digital entrepreneurship: Innovative business models for the sharing economy. *Creativity and Innovation Management*, *26*(3), 300–310. https://doi.org/10.1111/caim.12227

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Sahut, J. M., Iandoli, L., & Teulon, F. (2021). The age of digital entrepreneurship. *Small Business*

Economics, *56*(3), 1159–1169. https://doi.org/10.1007/s11187-019-00260-8

Schwab, K. (2017). *The fourth industrial revolution*. Crown Business.

Seemiller, C., & Grace, M. (2016). *Generation Z goes to college*.

Small, G., & Vorgan, G. (2018). *iBrain: Surviving the technological alteration of the modern mind.* Harper Collins Publishers.

Statistik, B. P. (2023). *Profil generasi milenial dan Z Indonesia 2023*. BPS RI.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509–533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

Turner, A. (2015). Generation Z: Technology and social interest. *The Journal of Individual Psychology*, *71*(2), 103–113. https://doi.org/10.1353/jip.2015.0021

UKM, K. (2023). *Perkembangan data usaha mikro, kecil, menengah dan usaha besar*. Kementerian Koperasi dan UKM.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, *46*(2), 186–204. https://doi.org/10.1287/mnsc.46.2.186.11926

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

Wade, M., & Hulland, J. (2004). The resource-based view and information systems research: Review, extension, and suggestions for future research. *MIS Quarterly*, *28*(1), 107–142. https://doi.org/10.2307/25148626

Yang, M., & Gabrielsson, P. (2017). Entrepreneurial marketing of international high-tech business-to-business new ventures: A decision-making process perspective. *Industrial Marketing Management*, *64*, 147–160.