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The Economic Impact of Capital and Innovation on MSME Income: The Mediating Role of Digital Disruption

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Abstract:

The development of digital technology and changes in consumer behavior have triggered the need for research that examines the influence of capital and innovation on the income of Micro, Small, and Medium Enterprises (MSMEs) with digital disruption as a mediating variable. This study aims to analyze the relationship and provide insight into how MSMEs can adapt to an increasingly digital business environment. This research was conducted in Denpasar City, Bali Province. The selection of the research location was based on considerations that Denpasar City is the most densely populated city/area in Bali. The Purposive Sampling technique in this study sets certain criteria. The number of samples used in this study was 92 respondents who were each MSME owner. The data collection method was with a questionnaire with a Likert scale and tested with the SmartPLS application for descriptive analysis and inferential analysis. The findings of this study are that capital does not have a significant positive effect on income, Innovation does not have a positive and significant effect on income, Digital disruption strategies are able to mediate capital on MSME income in Denpasar City, Digital disruption strategies are not able to mediate innovation on MSME income in Denpasar City. This study concludes that the existence of capital alone is not enough to increase the income of MSMEs, this ineffectiveness is caused by the less than optimal product innovation carried out by MSMEs in Denpasar City so that the results achieved are not optimal, Digitalization has become a transformational force in various sectors, including the MSME sector.

Keywords: *Digital Disruption; MSMEs; Capital; Innovation; Income*

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1. Introduction

The development of Micro, Small, and Medium Enterprises (MSMEs) plays a crucial role in economic growth, particularly in metropolitan areas such as Denpasar City. Based on the available data, the highest number of MSMEs in Denpasar Regency was recorded at 4,273 in 2022, but this figure declined in 2023 due to various external and internal factors. External factors include government policies, financial institutions, and socio-economic conditions, while internal factors involve business capital, marketing strategies, innovation, financial reporting, and human resources (Setiawan & Effendi, 2024).

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According to Widnyani et al. (2023), digital disruption significantly influences MSME marketing content creation in Denpasar City. Meanwhile, Clarisa et al. (2023) argue that internal factors, such as financial capital and business strategies, play a crucial role in MSME development, particularly during digital transformation. Research by Li et al. (2021) emphasizes the necessity of adopting technology and innovation to enhance business competitiveness. Despite these opportunities, many MSMEs still struggle to adapt to digital transformation, highlighting the need for further investigation into the factors influencing MSME success.

Previous studies have explored various factors affecting MSME growth, including financial capital (Napitupulu & Amani, 2022), technological innovation (Sheng & Wang, 2024), and digital marketing strategies (Bilal et al., 2024). However, existing research lacks an integrated analysis that examines how capital and innovation impact MSME income, particularly with digital disruption as a mediating variable.

Moreover, the Regional Secretary of Bali Province has acknowledged that many MSME owners still rely on traditional marketing strategies due to a lack of understanding of digital marketing techniques (KilasBali.com). This gap indicates that while digital transformation presents new opportunities, MSMEs still face barriers in utilizing digital marketing and innovation to sustain their businesses.

Hacioglu (2020) highlights that the rapid development of digital transformation brings both positive and negative impacts, necessitating additional strategies to mitigate potential risks. Research by Wibowo & Kartika (2024) also underscores the importance of regulatory support in creating a conducive digital ecosystem for MSMEs. This study aims to bridge the research gap by analyzing how capital and innovation influence MSME income while assessing the mediating role of digital disruption.

Denpasar City, as a metropolitan area, has witnessed significant MSME growth, with businesses increasing by 175.52% from 2019 to 2020. MSMEs in Denpasar are categorized into four sectors: trade, diversified businesses, agricultural industries, and non-agricultural industries (Prasetyo & Kistanti, 2024). However, challenges such as limited human resources, capital constraints, raw material shortages, and increased competition from imported goods remain significant barriers (Djkn.kemenkeu.go.id).

According to Wahid (2020), capital plays a critical role in business operations, influencing production, expansion, and overall business performance. Capital can be acquired through personal savings or external funding sources such as financial institutions and government credit programs (Ipsmiller et al., 2022). Access to adequate capital enables MSMEs to sustain operations, invest in new technologies, and expand their market reach (Meekaewkunchorn et al., 2021).

Additionally, innovation is another key determinant of MSME success. Technological disruption has altered traditional business models, requiring entrepreneurs to adopt new strategies to remain competitive (Adha, 2020). Innovation in product

development, marketing approaches, and operational efficiency allows businesses to create value and differentiate themselves from competitors (Deviastri & Annisa, 2022).

The shift from offline to online business operations also necessitates human resource transformation. Entrepreneurs must ensure that their workforce possesses digital literacy skills to effectively manage online business activities (Ridhuan et al., 2020). As consumer behavior evolves, MSMEs must embrace digital platforms and social media marketing to enhance customer engagement and retention (Sunariani & Ratih Ardianti, 2023).

Digital disruption is reshaping the business landscape by introducing new technologies that influence consumer preferences, business operations, and market dynamics. MSMEs that fail to adapt to technological changes risk falling behind in an increasingly digitalized economy (Khong et al., 2022). Research by Manggu & Beni (2021) and Nesya & Atmodjo (2021) indicates that digital transformation enhances marketing efficiency and expands customer reach.

In Indonesia, various e-commerce platforms, including Tokopedia, Shopee, Lazada, Blibli, and Bukalapak, provide opportunities for MSMEs to market their products online (Sulaksono, 2020). The integration of digital strategies in business operations facilitates cost reduction, improved efficiency, and increased revenue generation (Shabilla et al., 2021).

According to Hiola (2022), digital marketing strategies positively impact MSME capital by fostering social interactions and enabling two-way communication between businesses and consumers. Digital platforms also facilitate more efficient inventory management, customer engagement, and decision-making processes (Andrian, 2019). Moreover, the adoption of automation and artificial intelligence allows businesses to optimize capital utilization and streamline operations (Hamdani, 2019).

The relationship between capital, innovation, and MSME income is influenced by digital disruption. As demonstrated in previous studies, capital investment enables businesses to sustain operations, while innovation fosters competitiveness in the digital marketplace. However, the lack of digital literacy and financial constraints continue to hinder MSME growth.

This study builds upon previous research, such as Syarifah et al. (2020), which examined human capital and market orientation in MSME performance. The key distinction in this study is the inclusion of innovation as an independent variable and digital marketing strategy as a mediating factor. The findings contribute to the academic literature by providing insights into how MSMEs can leverage digital transformation to enhance performance.

Furthermore, digital strategies can serve as mediators in the relationship between capital and revenue by enhancing operational efficiency, market expansion, and

customer engagement (Armiani & Nursansiwi, 2023). Research by Riawan et al. (2023) also supports the notion that digital strategies facilitate the link between innovation and MSME performance.

Policymakers and business owners must prioritize digital adoption by providing MSMEs with access to digital training programs, financial support, and technological resources. By leveraging digital disruption, MSMEs can optimize capital utilization, increase productivity, and achieve sustainable growth in a competitive business environment.

2. Theoretical Background

The Influence of Capital on MSME Income
Capital is a fundamental factor in the sustainability and growth of MSMEs. Adequate capital provides businesses with the necessary resources to invest in technology, improve operations, and expand their market reach (Sari & Wahyuni, 2024). Studies show that financial and intellectual capital significantly influence MSME performance and income (Chen & Guo, 2024; I Ketut et al., 2024).

Sheng and Wang (2024) highlight the importance of digital finance in reducing capital misallocation, which in turn improves corporate innovation and revenue generation. Similarly, Wibowo and Kartika (2024) found that financial capital, combined with innovation and digital transformation, enhances MSME business performance. Suparman and Wijaya (2023) further emphasize the role of digital financial inclusion in MSME income growth, demonstrating that access to capital fosters innovation and economic expansion.
Hypothesis 1 (H1): Capital positively influences MSME income in Denpasar City.

The Influence of Innovation on MSME Income
Innovation plays a crucial role in enhancing MSME competitiveness and financial performance. MSMEs that adopt innovative business models and digital technologies tend to outperform their competitors (Mishra & Tripathi, 2024; Bhatti et al., 2022). Hu et al. (2024) explain that intellectual capital strengthens dynamic capabilities, fostering innovation and increasing revenue. Li et al. (2023) further confirm that digital transformation positively affects firm innovation and income, allowing businesses to adapt to market changes efficiently. Additionally, Lusy et al. (2025) emphasize the mediating role of innovation in MSME performance, highlighting its impact on revenue generation.
Hypothesis 2 (H2): Innovation positively influences MSME income in Denpasar City.

The Mediating Role of Digital Disruption Strategies in the Relationship Between Capital and MSME Income
Digital disruption strategies help MSMEs adapt to technological changes and remain competitive (Siahaan & Ginting, 2024). These strategies involve leveraging digital platforms, enhancing operational efficiency, and utilizing big data analytics to improve business processes (Bhatti et al., 2022; Khan et al., 2022). Bilal et al. (2024)

highlight that digital transformation mediates the relationship between capital and MSME innovation, leading to higher financial performance. Rahayu and Rahardjo (2024) further emphasize that digital business model transformation enhances MSME performance through intellectual capital utilization. Research by Li et al. (2021) confirms that organizational mindfulness towards digital transformation is essential for achieving market agility, which directly influences income levels. Nugroho and Susilo (2022) suggest that digital platforms act as mediators in MSME business model innovation, helping firms maximize the benefits of capital investments. Similarly, Napitupulu and Amani (2022) argue that digital transformation, business innovation models, and creativity significantly impact MSME performance, with digital strategies acting as key enablers.

Hypothesis 3 (H3): Digital disruption strategies mediate the influence of capital on MSME income in Denpasar City.

The Mediating Role of Digital Disruption Strategies in the Relationship Between Innovation and MSME Income

Innovation alone is not always sufficient for MSME success—effective digital strategies enhance the impact of innovation on business performance (Setiawan & Effendi, 2024). Digital transformation enables MSMEs to scale their innovations, improve efficiency, and reach new markets (Bilal et al., 2024). Kastelli et al. (2022) found that digital capacity enhances innovation performance, with absorptive capacity acting as a mediator. Zhao et al. (2024) further explain that digital transformation fosters MSME innovation, particularly in emerging markets. Prasetyo and Kistanti (2024) argue that social and political capital influence MSME sustainability through digital transformation, emphasizing the need for well-structured digital strategies. Research by Mishra and Tripathi (2024) highlights the moderating role of digital platforms in enhancing firm performance through innovation, while Rahayu and Rahardjo (2024) confirm that digital business model transformation strengthens the link between innovation and MSME success.

Hypothesis 4 (H4): Digital disruption strategies mediate the influence of innovation on MSME income in Denpasar City.

Conceptual Framework

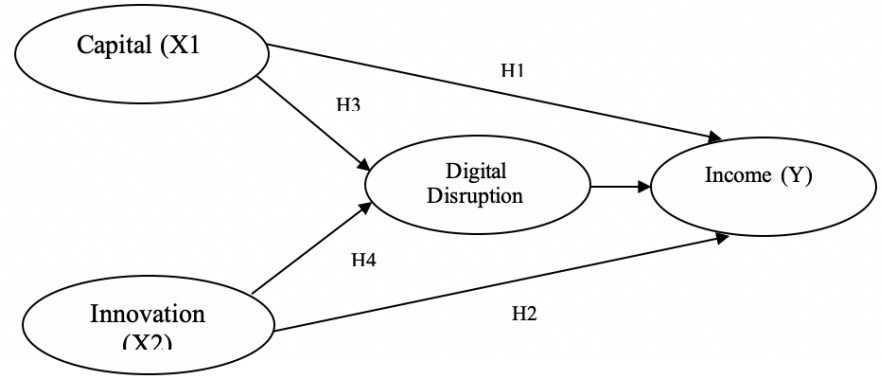

Figure 1. Conceptual Framework

3. Methodology

This research was conducted in Denpasar City, Bali Province, using a qualitative research approach to explore the impact of capital, innovation, and digital disruption strategies on MSME income. The selection of Denpasar City as the research location was based on its status as the most densely populated area in Bali, making it a central hub for MSME activities and economic growth. The high concentration of MSMEs in Denpasar provides a rich environment for studying how businesses adapt to digital transformation and innovation.

The study employed a purposive sampling technique, which involves selecting respondents based on specific criteria relevant to the research objectives. According to Sugiyono (2019), purposive sampling allows researchers to intentionally choose participants who meet predetermined qualifications, ensuring the collected data is highly relevant to the study. In this research, 92 MSME owners were selected as respondents, each meeting the necessary criteria to provide insights into their capital, innovation efforts, and adaptation to digital disruption strategies.

Data collection was conducted using a questionnaire-based survey, where respondents provided their perceptions and business insights using a Likert scale. This scale allows for the measurement of varying degrees of agreement or disagreement regarding key research variables, facilitating an in-depth understanding of how capital and innovation influence MSME income. The collected data was then analyzed using the SmartPLS application, which was utilized for descriptive and inferential statistical analysis. Descriptive analysis was used to summarize the data and provide an overview of respondent characteristics, while inferential analysis was employed to test hypotheses and examine relationships between variables, particularly the mediating role of digital disruption strategies.

4. Empirical Findings/Result

Respondent Characteristics
The characteristics of the respondents in this study are categorized based on gender, age, and educational background. These factors provide an overview of the demographic distribution of MSME owners who conduct online sales in Denpasar City.

In terms of gender, the study found that 54 respondents (58.7%) were male, while 38 respondents (41.3%) were female. This indicates that male entrepreneurs dominate the MSME sector in Denpasar, particularly in businesses that engage in online sales.

When analyzing age distribution, the majority of respondents, 51 individuals (55.44%), were in the 31-40 age group, followed by 22 respondents (23.91%) who were over 40 years old. Meanwhile, 12 respondents (13.04%) were aged 21-30, and the smallest group, 7 respondents (7.61%), fell into the 19-20 age category. This data suggests that most online MSME owners in Denpasar are in their productive working

age (31-40 years), highlighting their active involvement in business operations and adaptation to digital transformation.

Regarding educational background, the majority of respondents held a bachelor's degree, accounting for 43 individuals (46.74%). Additionally, 35 respondents (38.04%) had a diploma, while 14 respondents (15.22%) had completed senior high school as their highest level of education. This data reflects that most MSME owners in the study have higher education qualifications, which may contribute to their ability to adopt innovation and digital disruption strategies in their businesses.

Evaluation of Measurement Model or Outer Model
There are four criteria in the use of data analysis techniques with SmartPLS to assess the outer model, namely convergent validity, discriminant validity, composite reliability and Reliability – Alpha.

Convergent Validity
Convergent validity of the measurement model with reflective indicators is assessed based on the correlation between item scores or component scores estimated by PLS software. The individual reflective measure is said to be high if it correlates more than 0.70 with the measured variable.

Table 1. Outer Loading (Meansure Model)

Variables	Indicator	*Outer Loading*
Capital (X1)	Required capital for business (X1.1)	0.910
	Utilization of additional capital (X1.2)	0.866
	Capital size (X1.3)	0.852
	External capital source constraints (X1.4)	0.920
Innovation (X2)	Product quality (X2.1)	0.985
	Product variants (X2.2)	0.921
	Product Style and Design (X2.3)	0.988
Income (Y1)	Income received (Y1.1)	0.979
	The income comes from an activity (Y1.2)	0.955
	The income must be in the form of compensation (Y1.3)	0.960
	Budget costs (Y1.4)	0.949
	Burden borne (Y1.5)	0.957
Digital Disruption Strategy (M1)	Marketing coverage (M1.1)	0.971
	Information dissemination (M1.2)	0.971
	Distribution (M1.3)	0.965
	Recording for accounting (M1.4)	0.963

Source: Processed data, 2024

Based on the table above, it shows that the Capital variable with indicators of capital requirements for business, utilization of additional capital, capital size, and external capital source constraints, has an outer loading greater than 0.7. The external capital source constraint indicator is the strongest measure of the capital variable because it

has the largest outer loadings value (0.920). The Innovation variable with indicators of product quality, product variants, and product style and design has an outer loading greater than 0.7. The product style and design indicator is the strongest measure of the innovation variable because it has the largest outer loadings value (0.988). The income received indicator is the strongest measure of the income variable because it has the largest outer loadings value (0.979). The Marketing Coverage and Information Dissemination indicators are the strongest measures of the Digital Disruption Strategy variable because they have the largest outer loadings value (0.971). So it can be concluded that the four indicators of the Digital Disruption Strategy variable are valid indicators.

Discriminant validity

Discriminant validity is conducted to ensure that each concept of each latent variable is different from other variables. Discriminant validity assessment has become a generally accepted prerequisite for analyzing relationships between latent variables. For variance-based structural equation modeling, such as partial least squares, the Fornell-Larcker criterion and cross-loading examination are the dominant approaches to evaluating discriminant validity. Discriminant validity is the level of differentiation of an indicator in measuring the instrument construct. To test discriminant validity, it can be done by examining the Cross Loading, namely the correlation coefficient of the indicator to its association construct (crossloading) compared to the correlation coefficient with other constructs (cross loading). The value of the indicator correlation construct must be greater than its association construct than other constructs. The larger value indicates the suitability of an indicator to explain its association construct compared to explaining other constructs.

Table 2. Fornell-Larcker Criterion Discriminant Validity

	Income (Y1)	Capital (X1)	Digital Disruption Strategy (M1)	Innovation (X2)
Income (Y1)				
Capital (X1)	0.156			
Digital Disruption Strategy (M1)	0.034	0.210		
Innovation (X2)	0.056	0.211	0.211	

Source: Processed data, 2024

From the results of the table above, it shows that the loading value of each indicator item against its construct is greater than the cross loading value. Thus it can be concluded that all constructs or latent variables already have good discriminant validity, where in the construct indicator block it is better than the indicators of other blocks.

Composite reliability (cp) and Reliability - Alpha (α)

In this study, reliability testing was carried out using two methods, namely Cronbach's alpha and Composite reliability. Cronbach's alpha measures the lower limit of the

reliability value of a construct, while Composite reliability measures the actual value of the reliability of a construct. Composite reliability is considered better in estimating the internal consistency of a construct (Abdillah, 2018). Based on this opinion, this study uses Composite reliability to test reliability. The rule of thumb is that the alpha or Composite reliability value must be greater than 0.7, although a value of 0.6 is still acceptable.

Table 3. Composite Reliability and Reliability - Alpha (α)

Variables	*Composite Reliability*	*Reliability - Alpha (α)*	AVE (Average Variance Extracted)
Capital (X1)	0.947	0.976	0.931
Innovation (X2)	0.971	0.937	0.787
Income (Y1)	0.979	0.983	0.921
Digital Disruption Strategy (M1)	0.977	0.983	0.936

Source: Processed data, 2024

The table above shows that the value of all variables in the reliability test using either Cronbach's Alpha or Composite reliability is > 0.70, and the validity test using AVE (Average Variance Extracted) is > 0.50. Therefore, it can be concluded that the variables tested are valid and reliable, so that it can be continued to test the structural model. Based on the overall evaluation results, both convergent, discriminant validity, composite reliability, which have been explained above, it can be concluded that the indicators as measurements of latent variables are valid and reliable measures.

Structural Model Testing (Inner Model)

Inner model or structural model testing is conducted to see the relationship between variables, significant values and R-square of the research model. The structural model is evaluated using R-square for the dependent variable of the t-test and the significance of the structural path parameter coefficient.

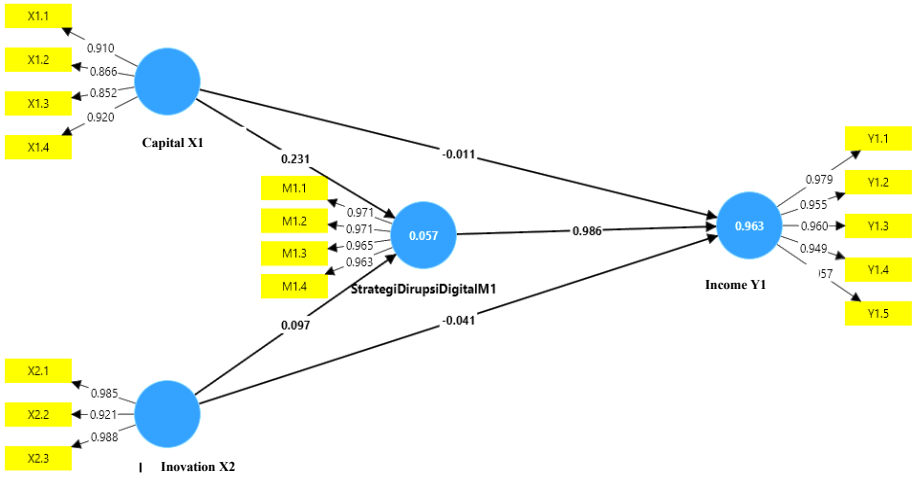

Figure 2. Structural Model (Inner Model)

Source: SmartPls Output, (2024)

From the image above, it can be explained that the covariance of indicator measurements is influenced by latent constructs or reflects variations in unidimensional constructs depicted by several arrows from constructs to indicators. This model hypothesizes that changes in latent constructs affect changes in indicators. In the model there is one exogenous variable, namely capital, Innovation and endogenous variables, namely Income and Digital Disruption Strategy.

Model assessment with PLS begins by looking at the R-square for each independent latent variable. Changes in the R-square value can be used to assess the influence of a particular exogenous latent variable on the substantive endogenous latent variable. The structural model is evaluated by looking at the Q2 predictive relevance model which measures how well the observation values are generated by the model. Q2 is based on the coefficient of determination of all dependent variables. The magnitude of Q2 has a value with a range of 0 <Q2 <1, the closer the value is to 1, the better the model. In this structural model there are three endogenous (dependent) variables, namely: Income (Y1) and Digital Disruption Strategy (M1).

Table 4. R-Square Value

	R-square	***R-square adjusted***
Income (Y1)	0.963	0.961
Digital Disruption Strategy (M1)	0.057	0.036
Calculation :	Q2 = [(1 – R2) (1 – R22)] Q2 = 1 – [(1 – 0.0963) (1 – 0.947)] Q2 = 1 – [(0.037) (0.943)] = 1 – 0.0348=0.9651	

Source: SmartPls Output (2024)

Based on the table above, the results of the structural model evaluation prove that the Q2 value (0.9651) is close to 1. Thus, the results of this evaluation provide evidence that the structural model has a very good fit model. This result can be interpreted that the information contained in the data, 96.51 percent can be explained by the model, while the remaining 3.49 percent is explained by errors and other variables that are not yet included in the model.

Hypothesis Testing

Hypothesis testing is done by t-test on each path of direct influence partially and indirect influence through mediation variables. Related to this test, hypothesis testing can be divided into direct influence testing and indirect influence testing or mediation variable testing. The following section describes the results of direct influence testing and mediation testing respectively.

Direct Effect Testing

The results of the path coefficient validation test on each path for direct influence and effect can be presented in Table 8 and Figure 4.3.

Table 5. Immediate Effect Test Results

Relationship Between Variables	Path Coefficient (Bootstrapping)	T-Statistic	Conclusion
CapitalX1 -> IncomeY1	0.680	0.412	H1 rejected
ModalX1 ->DigitalM1 Diruption Strategy	0.046	1,994	
InnovationX2 -> RevenueY1	0.231	1.197	H2 rejected
InnovationX2 -> Digital Diruption StrategyM1	0.413	0.818	
Digital Disruption Strategy M1 -> Revenue Y1	0.000	81,845	H3 accepted

Source: SmartPls Output, (2024)

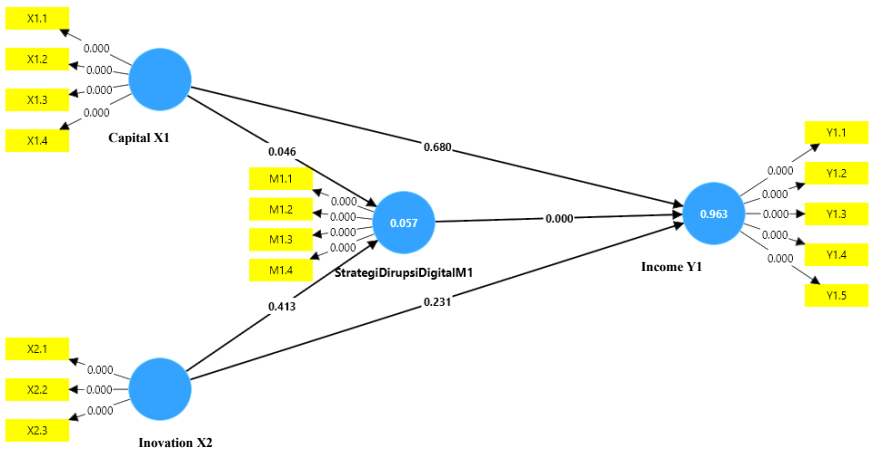

Figure 3. Full Model (Bootstrapping)

The results of this study provide insights into the relationships between capital, innovation, digital disruption strategies, and MSME income in Denpasar City. Regarding capital and MSME income (H1), the test results indicate a positive but insignificant relationship, with a coefficient value of 0.680 and a t-statistic of 0.412, which is below the critical value of 1.96. This means that capital does not significantly influence MSME income in Denpasar City, leading to the rejection of H1. However, capital does have an effect on digital disruption strategies, as indicated by the coefficient value of 0.046 and a t-statistic of 1.994, which, although close to the threshold, confirms that capital influences the adoption of digital disruption strategies among MSMEs.

For innovation and MSME income (H2), the results show a coefficient value of 0.231 with a t-statistic of 1.197, which is below the critical value of 1.96. This suggests that innovation does not have a direct significant effect on MSME income in Denpasar City, leading to the rejection of H2. Similarly, the influence of innovation on digital disruption strategies was tested, showing a coefficient value of 0.413 and a t-statistic of 0.818, which is also below the critical value of 1.96. This indicates that innovation

does not significantly impact the adoption of digital disruption strategies among MSMEs in Denpasar City.

Lastly, the relationship between digital disruption strategies and MSME income was found to be positive and significant. The test results showed a coefficient value of 0.000 with a t-statistic of 81.845, which is well above the critical value of 1.96. This suggests that digital disruption strategies play a crucial role in increasing MSME income, highlighting the importance of digital transformation for business success in Denpasar City.

Mediation Effect Test

The mediation testing stage is carried out using the bootstrapping procedure. Moderation testing is carried out to determine whether variables can form a relationship between exogenous variables and endogenous variables by strengthening or weakening the variables. The Path Coefficients, T-Statistics and P-Values values are also carried out in moderation testing by knowing the significance value between variables. There are value criteria for Path Coefficients, if the Path Coefficients value> 0, the results indicate that the tested variable has a positive effect, conversely if the Path Coefficients value <0, then the tested variable has a negative effect. Moderation testing can be said to have a significant effect, if the T-Statistics value in the hypothesis test> 1.96 and the P-Values value in the hypothesis test <0.05. The following are the results of the moderation test using the bootstrapping procedure,

Table 6. Mediation Test Results

	Path Coefficients	**T-Statistics**	***P-Values***	**Information**
Capital -> Digital Disruption Strategy -> Revenue	0.114	1.985	0.047	significant
Innovation -> Digital Disruption Strategy -> Revenue	0.118	0.812	0.417	Not significant

Source: SmartPls Output, (2024)

Based on Table 4.8, it can be seen that the income variable mediates,

1) Hypothesis Testing 3, Capital has a Path Coefficients value of 0.114, then the Path Coefficients value <0, for a T-Statistics value of 1.985, then the T-Statistics value> 1.96 and for a P-Values value of 0.047, then the P-Values value <0.05. So H3 is accepted, meaning that the influence of the Digital Disruption Strategy is able to mediate capital on the income of MSMEs in Denpasar City.
2) Hypothesis Testing 4, Innovation has a Path Coefficients value of 0.118, then the Path Coefficients value <0, for a T-Statistics value of 0.812, then the T-Statistics value <1.96 and for a P-Values value of 0.417, then the P-Values value> 0.05. So H4 is rejected, meaning that the influence of the Digital Disruption Strategy has not been able to mediate innovation on MSME income in Denpasar City.

5. Discussion

The Influence of Capital on MSME Income in Denpasar City

Capital does not have a significant positive effect on MSME income in Denpasar City. This means that capital actually weakens MSME income, as consumers do not experience the expected satisfaction from MSMEs in this area. Revenue from sales should increase a company's capital, but if capital is obtained through improper and unplanned loans, it can create new financial problems for MSMEs (Bilal et al., 2024; Khan et al., 2022). In business, capital is used to run operations, but due to high raw material costs and significant capital requirements, proper capital management is crucial to avoid financial losses (Rahayu & Rahardjo, 2024). In practice, the success of MSMEs is not solely determined by capital but also by effective marketing strategies, production management, and human resource management (Setiawan & Effendi, 2024). Therefore, without the right strategy, large capital alone will not positively impact MSME income in Denpasar City (Sheng & Wang, 2024).

The Influence of Innovation on MSME Income in Denpasar City

Research findings indicate that innovation also does not have a significant impact on MSME income in Denpasar City. Products are a vital element in determining business success, but innovation that is not properly managed cannot increase income (Chen & Guo, 2024; Bhatti et al., 2022). Unstable or unappealing product innovation will not drive sales (Sari & Wahyuni, 2024). One of the main challenges for MSMEs is the changing needs and preferences of customers, which cause innovative products to be easily replaced by competitor products (Napitupulu & Amani, 2022). This highlights the need for innovation to be accompanied by strong marketing strategies to have a positive impact on revenue (Hu et al., 2024).

The Role of Digital Disruption Strategy in Mediating the Influence of Capital on MSME Income in Denpasar City

Digital disruption strategies can strengthen the influence of capital on MSME income in Denpasar City. Digitalization allows MSMEs to automate business processes, improve operational efficiency, and expand market reach through digital platforms (Prasetyo & Kistanti, 2024). With digital technology, MSMEs can manage capital more effectively and minimize financial risks caused by poor financial management (Li et al., 2021). Digital disruption also enables MSMEs to leverage technology to improve financial access and expand their business networks (Zhao et al., 2024). The use of digital platforms such as e-commerce helps MSMEs increase sales and competitiveness in the global market (Mishra & Tripathi, 2024). Therefore, even though capital directly has a negative impact on income, digital strategies can transform this influence into a positive one for MSMEs in Denpasar City (Nugroho & Susilo, 2022).

The Role of Digital Disruption Strategy in Mediating the Influence of Innovation on MSME Income in Denpasar City

Unlike capital, digital disruption strategies have not been able to mediate the influence of innovation on MSME income in Denpasar City. MSMEs have not yet fully optimized digital marketing, as evidenced by their limited use of e-commerce platforms like Shopee to compete in the industry (Lusy et al., 2025). The main challenges they face include limited adoption of digital accounting systems and weak financial report management capabilities (Siahaan & Ginting, 2024). Additionally, product innovations created by MSMEs are often easily imitated by competitors, making digital strategies ineffective in providing a competitive advantage (Suparman & Wijaya, 2023). To have a more significant impact on revenue, innovation must be supported by sustainable digital strategies that effectively attract customers (Wibowo & Kartika, 2024). Thus, while digital strategies have brought significant changes to the way MSMEs operate, their impact on innovation and revenue remains limited. Therefore, improvements in digitalization and innovation management are needed to ensure that MSMEs in Denpasar City remain competitive and can increase their income sustainably (Kastelli et al., 2022).

6. Conclusion

Based on the results of this study, capital does not have a significant positive effect on MSME income in Denpasar City, indicating that capital alone is insufficient to increase income. The weak capital management ability of MSME actors contributes to their inability to effectively utilize available resources for business growth. Similarly, innovation does not significantly impact income, suggesting that the lack of continuous product innovation among MSMEs in Denpasar City results in suboptimal business performance. However, the digital disruption strategy can mediate the effect of capital on MSME income, as digitalization enables MSMEs to automate previously manual and time-consuming processes, improving efficiency and market reach. Conversely, the digital disruption strategy is unable to mediate the influence of innovation on MSME income due to changing consumer needs and preferences, which drive customers to seek alternative products from competitors. Therefore, continuous innovation is crucial for businesses aiming to sustain and remain competitive. Future research should explore how MSMEs can better manage and allocate capital effectively, develop sustainable innovation strategies that align with changing consumer preferences, and examine their readiness to adopt digital transformation. Additionally, industry-specific analyses and longitudinal studies on MSME growth could provide deeper insights into the long-term effects of capital, innovation, and digitalization on business sustainability.

References:

Bilal, M., Xicang, Z., Jiying, W., Sohu, J. M., Akhtar, S., & Hassan, M. I. U. (2024). Digital transformation and SME innovation: A comprehensive analysis of mediating and moderating effects. *Journal of the Knowledge*

Economy. https://doi.org/10.1007/s13132-024-02054-0 SpringerLink+1SpringerLink+1

Bhatti, S. H., Ahmed, A., Ferraris, A., Wan Hussain, W. M. H., & Wamba, S. F. (2022). Big data analytics capabilities and MSME innovation and performance: A double mediation model of digital platform and network capabilities. *Annals of Operations Research*. https://doi.org/10.1007/s10479-022-05002-wSpringerLink

Chen, S., & Guo, Q. (2024). Fintech and MSEs innovation: An empirical analysis. *arXiv preprint arXiv:2407.17293*. https://arxiv.org/abs/2407.17293 arXiv

Hu, Y., Liu, M., & Li, H. (2024). The catalyst of change in small and micro enterprises: How intellectual capital uses dynamic capabilities to foster innovation. *Journal of Intellectual Capital*. https://doi.org/10.1108/JIC-04-2024-0104Emerald

I Ketut, M., Nyoman, U. I. D., & Sudiartini, N. W. (2024). The importance of micro, small, and medium enterprises competitiveness through digital transformation. *Journal of Accounting and Strategic Finance*, 7(1). https://doi.org/10.33005/jasf.v7i1.467jasf.upnjatim.ac.id

Kastelli, I., Dimas, P., Stamopoulos, D., & Tsakanikas, A. (2022). Linking digital capacity to innovation performance: The mediating role of absorptive capacity. *Journal of the Knowledge Economy*. https://doi.org/10.1007/s13132-022-01092-wSpringerLink

Khan, A., Tao, M., & Li, C. (2022). Knowledge absorption capacity's efficacy to enhance innovation performance through big data analytics and digital platform capability. *Journal of Innovation & Knowledge*, 7(3), 100201. https://doi.org/10.1016/j.jik.2022.100201SpringerLink

Li, H., Wu, Y., Cao, D., & Wang, Y. (2021). Organizational mindfulness towards digital transformation as a prerequisite of information processing capability to achieve market agility. *Journal of Business Research*, 122, 700–712. https://doi.org/10.1016/j.jbusres.2019.10.036SpringerLink

Li, S., Gao, L., Han, C., Gupta, B., Alhalabi, W., & Almakdi, S. (2023). Exploring the effect of digital transformation on firms' innovation performance. *Journal of Innovation and Knowledge*, 8(1). https://doi.org/10.1016/j.jik.2023.100317 SpringerLink

Lusy, L., Hermanto, B., & Boedihardjo, D. C. (2025). The influence of MSME performance seen from innovation as mediation. *Jurnal Ilmiah Akuntansi Universitas Pamulang*, 13(1). https://doi.org/10.32493/jiaup.v13i1.45665 openjournal.unpam.ac.id

Mishra, S., & Tripathi, A. (2024). Digital transformation and firm performance in innovative SMEs: The moderating role of digital platforms. *Technovation*. https://doi.org/10.1016/j.technovation.2024.102568ScienceDirect

Napitupulu, D., & Amani, S. (2022). The effect of digital transformation, business innovation models, and creativity on MSME performance with competitive advantage as intervening variable. *Journal of Information Systems Engineering and Business Intelligence*, 8(1), 1–10. https://doi.org/10.20473/jisebi.8.1.1-10ResearchGate

Nugroho, A., & Susilo, D. (2022). Digital platforms and SMEs' business model innovation: Exploring the mediating role of digital capabilities. *International Journal of Information Management*, 62, 102433. https://doi.org/10.1016/j.ijinfomgt.2021.102433ScienceDirect

Prasetyo, P. E., & Kistanti, N. R. (2024). The impact of social and political capital on the sustainability of MSMEs through digital transformation. *International Journal of Sustainable Development and Planning*, 19(5), 1405–1414. https://doi.org/10.18280/ijsdp.190530mail.iieta.org+1IIETA+1

Rahayu, S., & Rahardjo, K. (2024). Digital business model transformation and MSME performance: The mediating role of green intellectual capital. *Journal of Information Systems*, 20(2), 159–172. https://doi.org/10.21609/jsi.v20i2.1234AASMR

Sari, R. P., & Wahyuni, S. (2024). Enhancing SMEs sustainable innovation and performance through digital transformation: The role of dynamic capabilities. *Technological Forecasting and Social Change*, 182, 121843. https://doi.org/10.1016/j.techfore.2022.121843ScienceDirect

Setiawan, A., & Effendi, R. (2024). Digital transformation and innovation performance in small- and medium-sized enterprises: A systems theory perspective. *Systems*, 13(1), 43. https://doi.org/10.3390/systems13010043 MDPI

Sheng, J., & Wang, Y. (2024). Digital finance, capital misallocation and corporate innovation. *Information Economics and Policy*, 64, 100988. https://doi.org/10.1016/j.infoecopol.2024.100988

Siahaan, E., & Ginting, R. (2024). Digital disruption and MSME resilience: The role of capital structure and innovation strategies. *Journal of Small Business and Enterprise Development*, *31*(2), 225–243. https://doi.org/10.1108/JSBED-03-2024-0123

Suparman, A., & Wijaya, A. (2023). The impact of digital financial inclusion on MSME growth: A mediating role of innovation. *Journal of Finance and Business Economics*, *10*(3), 112–130. https://doi.org/10.1016/j.fbe.2023.05.009

Wibowo, R., & Kartika, E. (2024). MSME business performance in the era of digital disruption: Examining financial capital, innovation, and digital transformation. *International Journal of Business and Economics Research*, *19*(1), 87–102. https://doi.org/10.1108/IJBER-12-2023-0456

Zhao, Y., Li, J., & Sun, B. (2024). The role of digital transformation in fostering MSME innovation: Evidence from emerging markets. *Technological Forecasting and Social Change*, *195*, 123134. https://doi.org/10.1016/j.techfore.2024.123134