



**THE IMPACT OF GLASS CEILINGS ON WOMEN'S DIGITAL
CAPABILITY MICRO-ENTERPRISE OWNERS WITH ADAPTABILITY AS A
MODERATION**

Selvy Noviniya¹

Universitas Swadaya Gunung Jati, Cirebon, Indonesia

selvy.122020534@ugj.ac.id

Anna Suzana²

Universitas Swadaya Gunung Jati, Cirebon, Indonesia

annasuzfeb@ugj.ac.id

Abstract

This study explores the phenomenon of invisible barriers or glass ceilings and their influence on strengthening digital capabilities among women running micro-enterprises in Cirebon Regency. Furthermore, this study also examines the position of adaptability as a moderating factor that strengthens this relationship. Through the lens of Dynamic Capabilities Theory, this research starts from the hypothesis that gender-based structural pressures can actually spur women entrepreneurs to be more agile in adopting digital technology for business sustainability. The research approach applied was quantitative, involving 168 female micro-enterprise owners in Cirebon Regency as a sample. All primary data collected through questionnaires were processed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) analysis techniques with the help of SmartPLS software. The analysis results found that the glass ceiling has a positive and significant contribution to increasing digital capability. This indicates that gender challenges often act as a catalyst for women entrepreneurs to deepen their mastery of technology. Furthermore, it was found that adaptability plays a crucial role in moderating and strengthening the correlation between the glass ceiling and digital capabilities. These findings recommend the need for strategic policies from local governments to provide digital assistance that focuses more on the resilience and adaptability aspects of women entrepreneurs.

Keywords: Glass Ceiling, Digital Capability, Adaptability, Women's MSMEs, PLS-SEM



INTRODUCTION

Currently, the global economy is rapidly moving toward a digital ecosystem driven by an unstoppable tide of technological disruption. This situation is automatically changing the landscape of business competition, with every business being forced to quickly integrate technology into their work systems to remain relevant (Sitompul et al., 2025; Rahman et al., 2025). The changes are not just minor adjustments, but a total transformation. In this situation, entrepreneurs' inability to respond to digital developments will not only hinder growth but also risk their businesses being marginalized from market competition. To anticipate this risk, businesses are required to have strong adaptability to translate any external disruptions into internal strategies that support business continuity (Respatiningsih et al., 2020). Technological adaptability is a crucial process businesses undertake to adapt to developments in information technology to support business sustainability and increase competitiveness amidst dynamic market competition (Sari, 2022).

The Micro, Small, and Medium Enterprises (MSMEs) sector in Indonesia plays a crucial role as a pillar of the national economy through its contribution to Gross Domestic Product (GDP). One major concern is the significant involvement of women in this sector, with approximately 60% of MSMEs driven by female entrepreneurs (Fauzi et al., 2020). Female MSMEs often face challenges due to insufficient knowledge or inability to adapt to the ever-changing digital business environment (Veranita et al., 2023). This suggests that the future of these MSMEs depends heavily on their digital capabilities. They are not only proficient in social media; they can also effectively build and manage digital assets to improve business efficiency. This invisible phenomenon prevents women from reaching strategic positions or higher levels in their businesses. It significantly limits women's ability to achieve these positions (Widyari et al., 2025). Therefore, as Fauzi et al. pointed out, (2020) and Pranitasari & Suriawinata (2025), strengthening capabilities is very important for business survival and preventing failure in long-term competition.

The theoretical context of this research is supported by numerous studies on strategic management. International research by Akther et al. (2024) states that strong management capacity is crucial, particularly in ensuring the sustainability of women-owned MSMEs in developing countries.

Therefore, enhancing digital capabilities for women entrepreneurs is an urgent strategic step to ensure competitiveness and more inclusive economic



growth. However, behind this central role, their business journey often clashes with non-technical and non-physical factors known as the Glass Ceiling (Oktarina et al., 2022). The term Glass Ceiling refers to invisible barriers that often prevent women from reaching the pinnacle of success, regardless of their previous achievements. Globally, this phenomenon demonstrates gender inequality in the workplace. It is also considered a systemic problem hindering the achievement of Sustainable Development Goal (SDG) 5 on gender equality (Muposhi et al., 2025). This condition is exacerbated by women facing often invisible structural barriers. There are hidden barriers that limit women's ability to achieve strategic positions. However, this is not due to individual incompetence. Interestingly, different strategic responses often result from these issues. Consequently, structural pressures can encourage women to use technology. The ability to adapt is an important way to overcome pressure. This helps to strengthen the relationship between strategic orientation and achieving optimal performance (Meitiana et al., 2024).

Strong structural and cultural barriers reinforce the Glass Building phenomenon in Indonesian small and medium-sized enterprises. Because of these conditions, women often face difficulties in developing and gaining full control over their business decisions (Khodijah et al., 2024).

The impact of these invisible barriers extends to management and access to development resources. A glass wall limits women's access to strategic resources, according to ample empirical evidence. This includes a lack of mentoring, difficulty securing important assignments, and a lack of opportunities for networking and formal training (Khodijah et al., 2024). This resource gap ultimately creates a significant resource gap for women entrepreneurs.

One of the most crucial structural barriers to the Glass Ceiling, particularly for women-owned MSMEs, lies in financial and capital discrimination. In practice, unwritten regulations and policies in many financial institutions in Indonesia often require that female micro-business owners applying for capital loans from banks must be accompanied by or obtain written permission from their partners. This gender-based requirement directly impairs women's financial autonomy, creating substantial limitations in accessing capital. Capital is a vital resource for investing in Digital Capabilities. Thus, the Glass Ceiling is hypothesized to not only threaten morale and motivation but also serve as an external variable that limits the ability of women entrepreneurs to finance and develop their Digital Capabilities.

Previous studies have shown that the Glass Ceiling lowers individuals' psychological well-being, manifesting in low work motivation (Imadoğlu et al.,



2020) and leading to a decline in overall performance (Putra et al., 2024). By testing the hypothesis that structural pressures from the Glass Ceiling, which restrict access to resources such as capital and training, positively impact Digital Capability, this research shifts from a psychological focus to a strategic one. A local study in Cirebon utilized digital capacity, a crucial operational skill, to increase competitiveness and maximize the potential of the social commerce market (Suzana et al., 2022). Consequently, the findings demonstrate a positive correlation between the glass ceiling and digital capability, providing a new perspective. This suggests that gender-based structural pressures in the field help women entrepreneurs become more resilient. Rather than being a crippling barrier, these challenges actually encourage them to be more bold in using digital technology to sustain local micro-businesses.

This is where the Research Gap is crucial for this study. Very few quantitative studies have examined the causal relationship between Glass Ceiling (as an exogenous factor) and Digital Capability (as an endogenous variable), especially in the women-owned MSME sector. The findings of this study demonstrate a pressing need to delve deeper into the data modeling process.

The aim is to gain an understanding of how female entrepreneurs handle external challenges, using them as opportunities to maximize their internal potential by mastering digital technology. To address the research gap regarding this strengthening mechanism, this study specifically presents Adaptive Capability as a moderating variable. In these stressful situations, adaptability is a key element that enables entrepreneurs to survive and adapt to dynamic environmental changes (Suseno & Triwanggono, 2018). Previous literature supports this approach. For example, Akther et al. (2024) stated that management capability is crucial for moderating the relationship between variables. The aim is to create a more resilient and sustainable business model where female entrepreneurs must have the ability to adapt to the dynamics of their business environment.

Teece et al.'s Dynamic Capabilities Framework is used to fundamentally analyze adaptability. In their seminal work, *Dynamic Capabilities and Strategic Management*, this theory argues that sustainable competitive advantage in turbulent environments stems from a firm's ability to integrate, build, and reconfigure internal and external competencies. Adaptability is a key pillar of this framework.

In the context of MSMEs, Adaptability is operationally defined as the capacity of entrepreneurs to proactively and flexibly change business strategies,



operational processes, and resource allocation in response to the demands of digitalization and market uncertainty (Siagian, 2025). This variable is positioned as a crucial moderator in the research model. Based on the observed phenomena, high Adaptability is expected to strengthen (positively moderate) the relationship between the Glass Ceiling and Digital Capability. This indicates that adaptive female entrepreneurs are able to respond to structural barriers by mobilizing creativity and seeking independent digital learning paths. In other words, adaptability provides additional energy for them to continue improving their digital capacity despite limited access due to the Glass Ceiling. This moderation model will later be tested using the Partial Least Squares-Structural Equation Modeling (PLS-SEM) method to verify the model's suitability to field data.

The challenges faced by women business owners in Cirebon Regency are evident in population data, which lists 168 registered women-owned micro, small, and medium enterprises (MSMEs). These figures demonstrate significant potential for women's leadership in the micro-sector, but also highlight significant challenges such as structural barriers and limited access. The study focused on these 168 women-owned MSMEs to determine their ability to survive and improve their digital capabilities amidst these challenges.

By examining how adaptability functions as a moderating variable when faced with structural barriers such as the Glass Ceiling, this research is expected to contribute to the development of dynamic capabilities theory. Furthermore, this study expands the literature on Digital Capability by positioning it as a form of internal capability developed as a strategic response to non-market factors, including challenges related to gender barriers.

LITERATURE REVIEW

By combining three interrelated key variables, a theoretical framework for this study was developed. Glass Enclosure was positioned as the independent variable (X), Digital Competence as the dependent variable (Y), and Adaptability served as a moderating variable (Z) to strengthen the relationship between the two.

Independent Variable (X):

Glass Ceiling. This variable refers to the theory developed by the Federal Glass Ceiling Commission (1991) and recent research by Luthra (2023). In this study, the Glass Ceiling is understood as a non-physical structural challenge, such as limited accessibility, that has traditionally prevented women from advancing in their careers or businesses. However, in this study, the Glass Ceiling is seen as a factor that encourages increased self-competence.

**Dependent Variable (Y).**

Teece, Pisano, and Shuen's (1997) Dynamic Capacity Theory, further strengthened by Mustonen et al. (2023), serves as the basis for this variable. The theory focuses on the ability of entrepreneurs to integrate and reconstruct internal and external expertise to sustainably master digital technology. Adaptability is a moderating variable.

Moderating Variable (Z).

Dynamic Capabilities Theory focuses on adaptability (Teece, 2018; Nguyen et al., 2023). It focuses on an individual's ability to identify environmental changes quickly and flexibly. This capability is intended to enhance strategic responses to Glass Ceiling challenges and optimize digital technology mastery.

RESEARCH METHOD

This study uses an associative quantitative approach, namely an approach that aims to systematically determine the relationship and influence between several variables through numerical data collection and statistical analysis (Sugiyono, 2017). This design was used because the study focuses on analyzing the impact of Glass Ceiling (X) on Digital Capability (Y), with Adaptability (M) as a moderating variable.

A quantitative approach was chosen because the results can be objectively measured through numbers, scales, and statistical calculations, allowing researchers to draw accurate conclusions about the relationships between variables. According to (Prof. Dr. Sugiyono, 2021), an associative quantitative approach is suitable for researching phenomena that can be measured with specific instruments, such as questionnaires with a Likert scale.

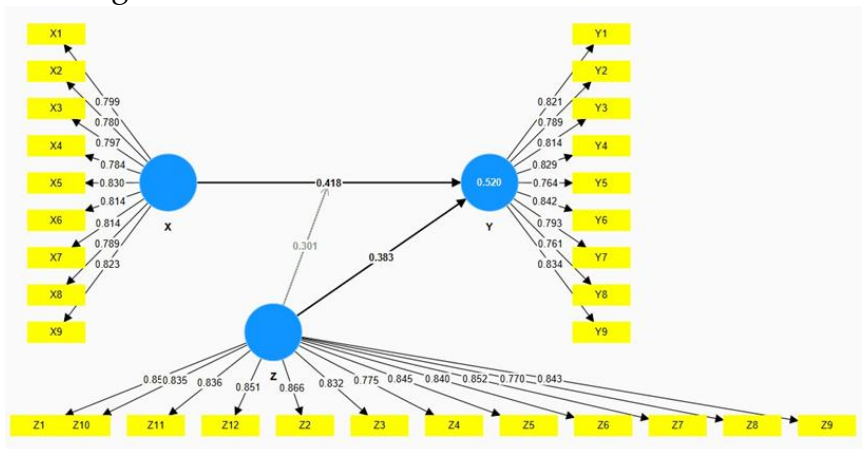
This research is also explanatory, meaning it explains the causal relationships between variables and tests hypotheses formulated based on theory and empirical studies. Therefore, this research not only describes the phenomenon but also explains the influence of the independent variable on the dependent variable through the reinforcing/weakening role of the moderating variable.

RESULTS AND DISCUSSION**Evaluation of Measurement Model (Outer Model)**

A crucial step in determining whether the indicators used to accurately and consistently represent the latent variables under study is the evaluation of the measurement model, also known as the outer model. The quality of the

instruments used is crucial to the performance of the SEMPLS model, therefore testing should include convergent validity, discriminant validity, and construct reliability (Hair et al., 2021). The three main constructs in this study are Glass Ceiling (X), Digital Ability (Y), and Adaptability (Z).

An external evaluation procedure was applied to the model. and Adaptability (Z). The standard used to ensure an optimal level of validity is a minimum factor loading value of 0.70. Based on the results of data processing using SmartPLS software, all statement items in this study showed values that exceeded this standard, with a range of 0.761 to 0.866. Thus, the research instrument was declared to have good convergent validity. In addition, the internal consistency of the model is strengthened by the Composite Reliability and Cronbach's Alpha values which are consistently above 0.70, indicating that the questionnaire has a very strong level of reliability for the next stage of hypothesis testing.



Convergent Validity

Convergent validity aims to test the extent to which indicators in a variable are interrelated or "converge" in measuring the construct. In PLS-SEM analysis, convergent validity is assessed based on two main criteria, namely the outer loading value and the Average Variance Extracted (AVE) value. Outer Loading Value Based on the results of data processing using SmartPLS, the factor loading values for each research indicator are obtained as follows:

Table 1. Outer Loading Values

Item	Loading Factor	Threshold	Information
X1	0.799	0.70	Valid
X2	0.780	0.70	Valid
X3	0.797	0.70	Valid



X4	0.784	0.70	Valid
X5	0.830	0.70	Valid
X6	0.814	0.70	Valid
X7	0.814	0.70	Valid
X8	0.789	0.70	Valid
X9	0.823	0.70	Valid
Y1	0.821	0.70	Valid
Y2	0.789	0.70	Valid
Y3	0.814	0.70	Valid
Y4	0.829	0.70	Valid
Y5	0.764	0.70	Valid
Y6	0.842	0.70	Valid
Y7	0.793	0.70	Valid
Y8	0.761	0.70	Valid
Y9	0.834	0.70	Valid
Z1	0.852	0.70	Valid
Z2	0.866	0.70	Valid
Z3	0.832	0.70	Valid
Z4	0.775	0.70	Valid
Z5	0.845	0.70	Valid
Z6	0.840	0.70	Valid
Z7	0.852	0.70	Valid
Z8	0.770	0.70	Valid
Z9	0.843	0.70	Valid
Z10	0.835	0.70	Valid
Z11	0.836	0.70	Valid
Z12	0.851	0.70	Valid
ZxX	1,000	0.70	Valid

Convergent validity was evaluated using outer loading and Average Variance Extracted (AVE) values. The measurement model results showed strong relationships between indicators and latent variables. For the Glass Ceiling variable (X), outer loading values ranged from 0.780 to 0.830, indicating high consistency because all indicators exceeded the 0.70 threshold. Similar findings were obtained for Digital Capability (Y), with values between 0.761 and 0.842, and Adaptability (Z), ranging from 0.770 to 0.866.

These results confirm that each indicator significantly explains the variance of its construct, meaning no indicators needed removal from the model. The



interaction construct (ZxX) recorded a value of 1.000, reflecting a perfect correlation produced by the moderation product-indicator procedure. Furthermore, all AVE values for constructs X, Y, and Z exceeded 0.50, demonstrating that the indicators adequately explained construct variance. Therefore, all variables satisfied the convergent validity requirements. These findings indicate that the measurement model was reliable and acceptable.

Discriminant Validity

Table 2. Discriminant Validity

	X	Y	Z	Z x X
X				
Y	0.527			
Z	0.067	0.452		
Z x X	0.178	0.460	0.093	

The next evaluation stage is testing discriminant validity using the Heterotrait-Monotrait Ratio (HTMT) method. The use of HTMT in this study is based on its higher accuracy compared to conventional methods in detecting validity issues between latent variables. The principle of this test is to ensure that one construct is truly empirically distinct and does not overlap with other constructs in the model.

Based on the algorithm's calculations, it was found that all HTMT values between constructs were well below the conservative threshold of 0.90. The highest ratio value was observed in the relationship between variables X and Y, at 0.527. Meanwhile, other pairs of variables showed much lower values, ranging from 0.067 to 0.460.

This score, which is below the 0.90 standard, confirms that there are no multicollinearity issues between the variables. In other words, each variable in this study, including Glass Ceiling, Digital Capability, and Adaptability, is a unique and statistically independent variable. Therefore, it can be concluded that this research model meets all discriminant validity criteria and is suitable for proceeding to the hypothesis testing stage.

Reliability

Table 3. Reliability Test Results

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
X	0.931	0.932	0.942	0.646
Y	0.932	0.934	0.943	0.649
Z	0.960	0.961	0.965	0.695



Based on the reliability test results, the Cronbach's Alpha value for variable X was 0.931, variable Y was 0.932, and variable Z was 0.960. All of these values were well above the minimum threshold of 0.70, indicating that each construct had excellent internal consistency.

Furthermore, the Composite Reliability values also showed very adequate results. The rho_a values for constructs X, Y, and Z were 0.932, 0.934, and 0.961, respectively, while the rho_c values were 0.942, 0.943, and 0.965, respectively. All of these composite reliability values exceeded the 0.70 criterion, thus concluding that the indicators for each construct were able to consistently measure the latent variables.

In addition, the Average Variance Extracted (AVE) value for construct X was 0.646, construct Y was 0.649, and construct Z was 0.695, all of which were greater than 0.50. This indicates that more than 50% of the indicator variance can be explained by the latent construct. Thus, based on the Cronbach's Alpha, Composite Reliability, and AVE values, all constructs in this study were declared reliable and had excellent measurement quality.

Inner Model Determination

Table 4. R-square

	R-square	R-square adjusted
Y	0.520	0.511

The evaluation of the structural model (inner model) was conducted by reviewing the coefficient of determination or R-square value. Based on the data processing results, the Digital Capability (Y) variable produced an R-square value of 0.520. This figure illustrates that simultaneously, the Glass Ceiling (X), Adaptability (Z), and the interaction effect between the two (ZxX) variables contributed 52.0% in explaining changes or variations in respondents' Digital Capability.

Meanwhile, the remaining 48.0% is explained by variables or factors outside this research model, such as financial support or other technological infrastructure. Furthermore, the adjusted R-square value of 0.511 indicates that this model has good stability and consistency, despite the addition of moderating variables to the system. With this value, the structural model in this study can be categorized as having moderate strength in predicting the phenomenon of increasing digital capacity among female micro-business owners in Cirebon Regency.



Multicollinearity

Table 5. Multicollinearity

	VIF
X1	2,325
X2	2,090
X3	2,344
X4	2,203
X5	2,726
X6	2,378
X7	2,398
X8	2,264
X9	2,500
Y1	2,501
Y2	2,340
Y3	2,466
Y4	2,535
Y5	1,985
Y6	2,868
Y7	2,187
Y8	2,007
Y9	2,637
Z1	3,330
Z10	2,910
Z11	2,959
Z12	3.145
Z2	3,605
Z3	3,142

After confirming validity and reliability, a collinearity test was conducted using the Variance Inflation Factor (VIF) to identify potential multicollinearity among indicators. In PLS-SEM, acceptable VIF values should remain below 5, preferably below 3, to ensure that each indicator contributes distinct information. The SmartPLS results indicate that all indicators of variable X (Glass Ceiling) have VIF values between 2.090 and 2.726, while variable Y (Digital Capability) ranges from 1.985 to 2.868. For variable Z (Adaptability), the VIF values range from 2.252 to 3.605, which are still within the acceptable threshold.



In addition, the interaction construct (ZxX) records a VIF value of 1.000, confirming the absence of collinearity issues in the moderating variable. Overall, all variables satisfy the VIF criteria, indicating that the research model is free from multicollinearity bias and suitable for hypothesis testing. These findings demonstrate strong indicator independence and support the structural model's accuracy, stability, and predictive reliability.

F Square

Table 6. F Square

	X	Y	Z	Z x X
X		0.353		
Y				
Z		0.303		
Z x X		0.224		

Further evaluation is carried out by reviewing the effect size or f-square (f2) value to determine the practical contribution of each independent variable to the dependent variable (Y). Based on Cohen's criteria, a value of 0.02 is categorized as small, 0.15 is categorized as medium, and 0.35 is categorized as large.

The test results show that variable X (Glass Ceiling) has a f2 value of 0.353, which means this variable has a large effect on the formation of Digital Capability (Y). This indicates that the perception of career challenges is a very dominant driving factor in this research. Meanwhile, variable Z (Adaptability) recorded a f2 value of 0.303 which is included in the medium to large category, indicating its crucial role in the model.

The most interesting finding is the interaction variable (ZxX), which has a f2 value of 0.224. This figure falls into the medium effect category. This finding provides strong empirical evidence that the existence of Adaptability is not merely complementary, but has a real and practically meaningful moderating role in strengthening the relationship between the Glass Ceiling and Digital Capability. In other words, changes in this moderating variable will have a significant impact on the strength of X's influence on Y in the field.

Significance Test

Table 7. Significance Test

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
X -> Y	0.418	0.424	0.052	7,969	0.000
Z -> Y	0.383	0.388	0.058	6,608	0.000



Z x X -> Y	0.301	0.298	0.049	6,091	0.000
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Hypothesis testing in this study was conducted to measure the degree of significance of the influence between variables through a bootstrapping procedure. By comparing the T-statistic value to 1.96 and the P-value below the 0.05 threshold, this step is crucial in determining whether the proposed hypothesis is accepted or not.

The results of this study are as follows:

1. The findings show that the glass ceiling significantly influences digital capability among female micro-business owners in Cirebon Regency. The statistical results indicate an original sample value of 0.418, a T-statistic of 7.969, and a P-value of 0.000, confirming a positive and significant relationship. These results demonstrate that women entrepreneurs respond to structural and cultural barriers by improving their digital skills to expand business opportunities and overcome career limitations. This supports Aini and Rofiqoh (2025), who argue that egalitarian values and equal access to education and economic opportunities encourage women’s empowerment despite persistent discrimination.
2. The Effect of Adaptability (Z) on Digital Capacity (Y) The Adaptability variable has an initial sample value of 0.383 with a T statistic of 6.608 and a P value of 0.000. The fact that Adaptability plays a positive and significant role in improving Digital Capability has been confirmed by this data. This shows that very important internal capital is mental readiness, flexibility, and openness. The more adaptability a female entrepreneur has, the faster and more efficient the process of adopting and implementing digital technology in their business.
3. The interaction test produced an original sample value of 0.301, a T-statistic of 6.091, and a P-value of 0.000, confirming that adaptability acts as a moderating variable that strengthens the influence of the glass ceiling on digital capability. High adaptability enables women entrepreneurs to transform structural challenges into opportunities for improving digital competence and business development.

Bootstrapping

Table 8. Bootstrapping

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	Tstatistics (O/STDEV)	P values
X -> Y	0.418	0.424	0.052	7,969	0.000



Z -> Y	0.383	0.388	0.058	6,608	0.000
Z x X -> Y	0.301	0.298	0.049	6,091	0.000

Based on the results of data analysis, testing on the X to Y path produces a coefficient value of 0.418, with a t-statistic score of 7.969 and a p-value of 0.000. In this case, the t-statistic value of 7.969 is proven to be greater than 1.96, and the p-value of 0.000 is proven to be smaller than 0.05. These findings provide strong evidence that variable X has a positive and statistically significant influence on variable Y.

Furthermore, on the Z to Y path, a coefficient value of 0.383 was obtained with a t-statistic of 6.608 and a p-value of 0.000. Since the t-statistic value of 6.608 is greater than 1.96 and the p-value of 0.000 is less than 0.05, it can be concluded that the Z variable also has a significant and positive influence on the Y variable.

Finally, testing on the interaction path Z x X to Y shows a coefficient of 0.301 with a t-statistic value of 6.091 and a p-value of 0.000. This confirms that the t-statistic value of 6.091 is significantly greater than 1.96 and the p-value of 0.000 is smaller than 0.05, which means that the interaction effect between variables X and Z on Y is statistically significant in strengthening the relationship in the research model.

Hypothesis Testing

H1: For female micro-business owners in Cirebon Regency, the glass ceiling has a positive and significant impact on digital skills.

The results of the study show that the path of influence of Glass Wall Barriers on Digital Ability has a coefficient that is positive and statistically significant. The t-statistic value of 7.969, which is greater than 1.96, and the p-value of 0.000, which is lower than 0.05, indicate this.

The results show that when they face the glass ceiling, female microbusiness owners are more motivated to improve their digital skills. The results suggest that the structural, social, and individual barriers women face encourage them to master and use digital technology as a means of survival and overcoming traditional career barriers. This phenomenon suggests that business owners are not overwhelmed by current challenges; instead, they are encouraged to seek new avenues online where they can connect with others.

Female micro-entrepreneurs in Cirebon Regency can leverage digitalization to expand access previously unattainable through conventional methods. This demonstrates the importance of digital capabilities in transforming burdens into opportunities for broader business growth. Hypothesis 1 (H1) was finally officially confirmed.



H2: Adaptability has a positive impact on the digital capabilities of female micro-business owners.

The Adaptability to Digital Capabilities path shows a positive and statistically significant coefficient, according to the bootstrapping results. The t-statistic value of 6.608, which is greater than 1.96, and the p-value of 0.000, which is lower than 0.05, indicate this. These results indicate that flexible strategies, readiness to learn, and a proactive attitude towards changes in the business environment can help improve the mastery and utilization of digital technology. Female business owners will be quicker to adopt digital tools for their business operations if they can adapt to dynamic market trends. This adaptability becomes an internal capital that is crucial for how effective digital transformation is at the micro-enterprise level. Consequently, Hypothesis 2 (H2) is declared accepted.

H3: Adaptability moderates the influence of Glass Ceiling on Digital Capability in female micro-business owners in Cirebon Regency.

Based on the test results on the interaction variable, a positive coefficient value was obtained with a t-statistic value of 6.091, which is greater than 1.96, and a p-value of 0.000, which is smaller than 0.05. These results indicate that adaptability truly acts as a moderating variable, which strengthens the influence of the Glass Ceiling on digital capabilities. When women run micro-businesses, the career obstacles they face will further enhance their digital capabilities due to their high adaptability. These findings indicate that the ability to be flexible and ready to anticipate changes in the business environment is a factor that encourages the use of technology amidst structural limitations. This moderating variable helps the research model explain the dynamics of the development of women's micro-enterprises in Cirebon Regency. Therefore, Hypothesis 3 (H3) is accepted.

Moderation Test

Table 9. Moderation Test

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	Tstatistics (O/STDEV)	P values
Z x X -> Y	0.301	0.298	0.049	6,091	0.000

	X	Y	Z	Z x X
Z x X		0.224		



The results of the moderation test show that the interaction path between Glass Ceiling Barriers and Adaptability to Digital Capability has a coefficient of 0.301, with a t-statistic value of 6.091 which is greater than 1.96 and a p-value of 0.000 which is smaller than 0.05. In addition, the results of the effect size test show an f-square value of 0.224 which is in the moderate category. This f-square number indicates that the Adaptability variable has a significant contribution in explaining changes in digital capacity when interacting with existing career barriers.

Theoretically, these results demonstrate that Adaptability acts as a reinforcing factor that accelerates the positive influence of the Glass Ceiling on Digital Capability among female micro-business owners in Cirebon Regency. With a high level of adaptability flexibility, perceived career barriers actually become a stronger driver for respondents to master digital technology more deeply as a business solution. This suggests that adaptability is key in transforming structural pressures into opportunities for technical competency improvement. Therefore, it can be concluded that Adaptability is proven to moderate and strengthen the relationship between the main variables in this research model.

CONCLUSION

Based on the research results and discussion in Chapter IV regarding the influence of Glass Ceiling on the Digital Capability of female micro-business owners in Cirebon Regency with adaptability as a moderating variable, the following conclusions can be drawn:

1. Glass Ceilings significantly influence digital capability. This study shows that despite structural barriers and gender challenges faced by female entrepreneurs in Cirebon Regency, these challenges actually serve as a catalyst for them to enhance their digital capabilities as a solution to overcome operational limitations and expand market reach.
2. Adaptability has a positive and significant impact on digital capability. These findings indicate that the higher the level of flexibility and willingness to learn independently among female entrepreneurs in Cirebon Regency, the greater their ability to master and implement digital technology in their businesses.
3. Adaptability moderates the effect of the Glass Ceiling on Digital Capability. The results show that Adaptability significantly strengthens this relationship. This means that female business owners in Cirebon Regency



with high adaptability will be much more effective in transforming the pressures or obstacles posed by the Glass Ceiling phenomenon into incentives to strengthen their digital capabilities.

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