(Review) Article

The Role of E-Commerce, Business Experience, and Industrial Agglomeration in Increasing the Income of Fashion SMEs in Denpasar

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Abstract: Micro, Small, and Medium Enterprise (MSME) revenues are affected by various factors that determine business continuity and the welfare of their owners. This study aims to analyze, both simultaneously and partially, the effects of e-commerce usage, business experience, and industrial agglomeration on the revenues of fashion-sector MSMEs in Denpasar City. A total of 100 fashion MSME operators were sampled, and the data were analyzed via multiple linear regression using SPSS 26. The resulting coefficient of determination (R^2) is 0.684, indicating that e-commerce usage (X_1), business experience (X_2), and industrial agglomeration (X_3) collectively explain 68.4% of the variance in MSME revenue (Y), with the remaining 31.6% attributable to factors beyond this study. The analysis shows that, together, the three independent variables significantly affect MSME revenues; separately, each—e-commerce usage, business experience, and industrial agglomeration—exerts a positive and significant impact on the revenues of fashion-sector MSMEs in Denpasar.

Keywords: MSMEs, Revenue, E-Commerce, Business Experience, Industrial Agglomeration

1. INTRODUCTION

One path toward Indonesia's vision of a developed nation is to pursue sustainable and equitable economic development that places people at its center, aiming to raise public welfare through expanded employment opportunities and more equitable income distribution. In this context, Micro, Small, and Medium Enterprises (MSMEs) play a strategic role as drivers of the local economy due to their capacity to absorb labor and remain resilient through economic crises (Wirawan & Indrajaya, 2019; Arka & Yasa, 2015).

MSMEs in Indonesia, including those in Bali, make substantial contributions to the national Gross Domestic Product and employment. Amid persistently high unemployment, MSMEs help bridge the gap between job seekers and available work, fostering structural change and inclusive growth as key components of the people's economy (Chłoń-Domińczak et al., 2020; Tambunan, 2021; Putra & Setyari, 2021).

As a premier tourist destination, Bali's unique cultural heritage enriches its creative-sector MSMEs—especially in fashion—by reflecting local identity and attracting both domestic and international visitors. While Buleleng Regency has the highest MSME count, Denpasar City has seen a decline in recent years due to intense competition among similar businesses, driving operators to innovate and strengthen their brand presence (Bali Cooperative and MSME Office, 2023).

Denpasar's complex economic structure places trade-sector MSMEs at the forefront of local revenue generation, with fashion ranking among the top three sub-sectors alongside culinary and agribusiness. With high population density and consumption levels, the fashion sector has significant growth potential, provided that enterprises leverage digitalization and align their products with market trends (Putri & Purwanti, 2022; Denpasar City Cooperative and MSME Office, 2024).

Fashion has evolved beyond a basic necessity into a means of self-expression and social identity, particularly among youth. Globalization has broadened Denpasar's consumer preferences toward international trends, boosting demand for apparel and accessories. Local fashion businesses must therefore adopt new technologies and digital marketing strategies to stay relevant and competitive in a dynamic marketplace (Putri & Purwanti, 2022; Dewi, 2022).

Recent data show that fashion MSMEs are distributed across all four Denpasar districts, with Denpasar Barat hosting the largest concentration. This positive growth trend, despite challenges such as capital constraints and technology adaptation, underscores the importance of investigating how e-commerce usage, business experience, and industrial agglomeration influence fashion MSME revenues in Denpasar, in order to develop effective support strategies (Denpasar City Cooperative and MSME Office, 2024).

2. METHOD

This study employs an associative quantitative approach to examine the relationships between e-commerce usage, business experience, and industrial agglomeration (independent variables) and the revenue of fashion MSMEs (dependent variable) in Denpasar City. Denpasar was selected for its status as an economic hub with fierce competition in the fashion sector. Each independent variable was measured on a Likert scale, while revenue was recorded on a ratio scale. From a population of 7,908 fashion MSMEs—classified as micro, small, and medium enterprises—a purposive Slovin sampling yielded a sample of 100 businesses across Denpasar Utara, Timur, Selatan, and Barat.

Data sources include primary data (questionnaires and structured interviews with MSME operators) and secondary data from relevant agencies. Data collection methods comprised non-participant observation, questionnaires, and structured interviews, ensuring comprehensive and objective information for testing the hypothesized influences of the independent variables on MSME revenues.

3. RESULTS AND DISCUSSION

Instrument Testing

All measurement items for e-commerce usage (X_1), business experience (X_2), and industrial agglomeration (X_3) proved valid, with each item's Pearson correlation exceeding the critical value ($r_t = 0.1966$, N = 100). Reliability analysis via Cronbach's Alpha yielded $\alpha X_1 = 0.749$, $\alpha X_2 = 0.647$, and $\alpha X_3 = 0.836$—each above the 0.60 threshold—confirming that the survey instruments are consistent and dependable for repeated use under similar conditions.

Research Data Analysis Results
Confirmatory Analysis
1) Factor Analysis of E-commerce Usage Variables

Table 1. Kaiser Mayer Olkin and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.641
Bartlett's Test of Sphericity	Approx. Chi-Square	162,983
	df	10
	Sig.	.000

Source: Processed Primary Data, (2025)

Table 1 shows that the Kaiser Mayer Olkin Measure of Sampling Adequacy value is 0.641 > 0.50 and the Bartlett's Test of Sphericity (Sig.) value is 0.000 < 0.50. This indicates that the correlation matrix between variables is not in the form of an identity matrix, so that there is adequate correlation between variables and allows the formation of factors. Based on these two results, it can be concluded that the data meets the requirements to proceed to the further factor analysis stage.

Table 2. Anti Image Matrices

Anti-image Matrices						
		X1.1	X1.2	X1.3	X1.4	X1.5
Anti-image Covariance	X1.1	.780	-.067	-.169	.133	-.187
	X1.2	-.067	.740	-.144	-.123	.006
	X1.3	-.169	-.144	.744	-.101	.010
	X1.4	.133	-.123	-.101	.322	-.242
	X1.5	-.187	.006	.010	-.242	.331
Anti-image Correlation	X1.1	.521a	-.089	-.222	.265	-.368
	X1.2	-.089	.832a	-.194	-.252	.012
	X1.3	-.222	-.194	.805a	-.206	.020

X1.4	.265	-.252	-.206	.586a	-.742
X1.5	-.368	.012	.020	-.742	.599a

a. Measures of Sampling Adequacy (MSA)

Source: Processed Primary Data, (2025)

Table 2 shows that there is a code (a) which means a sign for Measure of Sampling Adequacy (MSA). It is known that the MSA value of each of the studied is X1.1 of 0.521, X1.2 of 0.832, X1.3 of 0.805, X1.4 0.586, and X1.5 of 0.599. The requirements that must be met in the factor analysis are MSA values > 0.50. So the second requirement in this factor analysis is met.

2) Factor Analysis of Business Experience Variables

Table 3. Kaiser Mayer Olkin and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.610
Bartlett's Test of Sphericity	Approx. Chi-Square	86,994
	Df	10
	Sig.	.000

Source: Processed Primary Data, (2025)

`Table 3 shows that the Kaiser Mayer Olkin Measure of Sampling Adequacy value is 0.610 > 0.50 and the Bartlett's Test of Sphericity (Sig.) value is 0.000 < 0.50. This indicates that the correlation matrix between variables is not in the form of an identity matrix, so that there is adequate correlation between variables and allows the formation of factors. Based on these two results, it can be concluded that the data meets the requirements to proceed to the further factor analysis stage.

Table 4. Anti Image Matrices

Anti-image Matrices

		X2.1	X2.2	X2.3	X2.4	X2.5
Anti-image Covariance	X2.1	.668	-.102	-.042	.120	-.332
	X2.2	-.102	.867	-.126	.001	-.098
	X2.3	-.042	-.126	.700	-.324	-.080
	X2.4	.120	.001	-.324	.735	-.113
	X2.5	-.332	-.098	-.080	-.113	.627
Anti-image Correlation	X2.1	..561*	-.134	-.061	.171	-.513
	X2.2	-.134	.793*	-.162	.001	-.133
	X2.3	-.061	-.162	.629*	-.451	-.121
	X2.4	.171	.001	-.451	.535a	-.166
	X2.5	-.513	-.133	-.121	-.166	.620*

a. Measures of Sampling Adequacy (MSA)

Source: Processed Primary Data, (2025)

Table 4 shows that there is a code (a) which means a sign for Measure of Sampling Adequacy (MSA). It is known that the MSA value of each of the studied is X2.1 of 0.561, X2.2 of 0.793, X2.3 of 0.629, X2.4 0.535, and X2.5 of 0.620. The requirements that must be met in the factor analysis are MSA values > 0.50. So the second requirement in this factor analysis is met.

3) Factor Analysis of Industrial Agglomeration Variables

Table 5. Kaiser Mayer Olkin and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.803
Bartlett's Test of Sphericity	Approx. Chi-Square	323,947
	Df	10
	Sig.	.000

Source: Processed Primary Data, (2025)

Table 5shows that the Kaiser Mayer Olkin Measure of Sampling Adequacy value is 0.803 > 0.50 and the Bartlett's Test of Sphericity (Sig.) value is 0.000 < 0.50. So the factor analysis in this study can be continued.

Table 6. Anti Image Matrices

Anti-image Matrices

		X3.1	X3.2	X3.3	X3.4	X3.5
Anti-image Covariance	X3.1	.752	-.229	-.071	-.016	.028
	X3.2	-.229	.705	.031	-.077	-.009
	X3.3	-.071	.031	.235	-.090	-.082
	X3.4	-.016	-.077	-.090	.182	-.106
	X3.5	.028	-.009	-.082	-.106	.211
Anti-image Correlation	X3.1	.814*	-.315	-.170	-.044	.071
	X3.2	-.315	.824*	.076	-.215	-.023
	X3.3	-.170	.076	.827*	-.436	-.368
	X3.4	-.044	-.215	-.436	.777*	-.539
	X3.5	.071	-.023	-.368	-.539	.799*

a. Measures of Sampling Adequacy (MSA)

Source: Processed Primary Data, (2025)

Table 6shows that there is a code (a) which means a sign for Measure of Sampling Adequacy (MSA). It is known that the MSA value of each of the studied is X3.1 of 0.814, X2.2 of 0.824, X3.3 of 0.827, X3.4 0.777, and X3.5 of 0.799. The requirements that must be met in the factor analysis are MSA values > 0.50. So the second requirement in this factor analysis is met.

Descriptive Statistical Analysis

Table 7. Descriptive Statistics Results

	N	Minimum	Maximum	Mean	Std. Deviation
E-commerce(X1)	100	2.40	4.00	3.4560	.41104
Business Experience (X2)	100	2.40	4.00	3.3640	.39223
Industrial Agglomeration (X3)	100	2.40	4.00	3.3900	.54486
Income (Y)	100	7000000.00	21000000.00	13825000.0000	4657119.56323
Valid N (listwise)	100				

Source: Processed Primary Data, (2025)

Based on the results of descriptive analysis in the table that the number of samples in this study is 100 people. The table above shows that the Income Variable (Y) has the lowest or minimum value of Rp 7,000,000.00 and the highest or maximum value of Rp 21,000,000.00 with an average value (mean) of Rp 13,825,000.0000 and a standard deviation of Rp 4,657,119.56323. The average value obtained is greater than the standard deviation value, so it can be concluded that the average of the income variable is able to describe all data well.

The use of E-commerce (X1), has the lowest or minimum value of 2.40 and the highest or maximum value of 4.00. The average value (mean) of E-commerce use is 3.4560 with a standard deviation of 0. 41104. This shows that the average of E-commerce Usage is higher than the standard deviation, which means that the level of deviation is relatively small compared to the average value. Thus, it can be concluded that the average of all data on the E-commerce Usage variable is able to represent that the overall condition of the variable is in good condition.

The Business Experience variable (X2) has the lowest or minimum value of 2.40 and

the highest or maximum value of 4.00. The average value (mean) of Business Experience is 3.3640 with a standard deviation of 0.39223. This shows that the average of Business Experience is higher than the standard deviation, which means that the level of deviation is relatively small compared to the average value. Thus, it can be concluded that the average of all data on the Business Experience variable is able to represent that the overall condition of the variable is in good condition.

The Industrial Agglomeration variable (X3) has the lowest or minimum value of 2.40 and the highest or maximum value of 4.00. The average value (mean) of Industrial Agglomeration is 3.3900 with a standard deviation of 0.54486. This shows that the average of Industrial Agglomeration is higher than the standard deviation, which means that the level of deviation is relatively small compared to the average value. Thus, it can be concluded that the average of all data on the Industrial Agglomeration variable is able to represent that the overall condition of the variable is in good condition.

Multiple Linear Regression Analysis

Table 8. Results of Multiple Linear Regression Analysis Test

Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	13825000.000	193081.395		71,602	.000
	E-commerce(X1)	1854012.035	419365.956	.398	4.421	.000
	Business Experience (X2)	977194.716	265373.667	.210	3,682	.000
	Industrial Agglomeration (X3)	1781392.014	440940.449	.383	4,040	.000
a. Dependent Variable: Income						

Source: Processed Primary Data, (2025)

Based on table 8then the multiple linear regression equation model formed in this study is as follows:

$$Y = \alpha + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + e$$

$\hat{Y}$ = (13825000.000) + (1854012.035 X1) + (977194.716 X2) + (1781392.014 X3)

See = (193081,395) (419365,956) (265373,667) (440940,449)

Thit = (71,602) (4,421) (3,682) (4,040)

Sig = (0.000) (0.000) (0.000) (0.000)

R2 = 0.833

Fhit = 159,985

The structural equation can be interpreted as follows:

1) The constant value of the UMKM Income variable is Rp. 13,825,000,000, indicating that if the use of E-commerce, Business Experience, and Industrial Agglomeration are equal to 0, then the UMKM income is estimated to be Rp. 13,825,000,000.

2) The E-commerce variable (X1) has a coefficient of 1854012.035, which means that E-commerce (X1) has a positive influence on Income (Y). This means that if E-commerce (X1) increases, Income (Y) will increase.

3) The Business Experience variable (X2) has a coefficient of 977194.716, which means that Business Experience (X2) has a positive influence on Income (Y). This means that if Business Experience (X2) increases, Income (Y) will increase.

4) The Industrial Agglomeration variable (X3) has a coefficient of1781392.014 which means that Industrial Agglomeration (X3) has a positive influence on Income (Y), this means that if Industrial Agglomeration (X3) increases then Income (Y) will increase.

Classical Assumption Test
1) Normality Test
Table 9. Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parametersa,b	Mean	.0000000
	Std. Deviation	1901334.14809945945
Most Extreme Differences	Absolute	.064
	Positive	.043
	Negative	-.064
Test Statistics		.064
Asymp. Sig. (2-tailed)		.200CD

Source: Processed Primary Data, (2025)

Based on Table 9, the Asymp.Sig value (2-tailed) is 0.200, so it can be concluded that the regression equation model is normally distributed because the Asymp.Sig value > 0.05, which is the commonly used significance limit.

2) Heteroscedasticity Test

Table 10. Heteroscedasticity Test Results

Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1495364.473	116018.559		12,889	.000
	E-commerce(X1)	111252.830	251988.203	.096	.442	.660
	Business Experience (X2)	-305732.277	159457.468	-.263	-1,917	.058
	Industrial Agglomeration (X3)	126045.222	264951.863	.108	.476	.635

Source: Processed Primary Data, (2025)

Based on the Glejser Test in table 10, it is shown that E-commerce (X1), Business Experience (X2) and Industrial Agglomeration (X3) have a Sig value > 0.05 which means there is no influence between the independent variables on the absolute residual. Thus, it can be said that the model equation does not have symptoms of heteroscedasticity.

3) Multicollinearity Test
Table 11. Multicollinearity Test Results

Coefficientsa

Model		Collinearity Statistics	
		Tolerance	VIF
1	E-commerce(X1)	.214	4,670
	Business Experience (X2)	.535	1,870
	Industrial Agglomeration (X3)	.194	5.163

Source: Processed Primary Data, (2025)

Based on the results of the multicollinearity test in table 11, it is known that all independent variables have VIF values that are smaller or less than 10 and Tolerance values greater than 0.1. This indicates that there are no symptoms of multicollinearity so that it meets the requirements of classical assumptions in regression analysis.

Coefficient of Determination (R2)

Table 12. Results of Determination Coefficient

Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.913a	.833	.828	1930813.95490

a. Predictors: (Constant), Industrial Agglomeration (X3), Business Experience (X2), E-commerce (X1)

Source: Processed Primary Data, (2025)

Based on the model summary table, the magnitude of the determination coefficient (Adjusted R2) is 0.828, which means that the variation in Income (Y) can be significantly influenced by E-commerce (X1), Business Experience (X2) and Industrial Agglomeration (X3) by 82.8 percent, while the remaining 17.2 percent is explained by other factors that are not included in the model.

Simultaneous Influence Test (F Test)

Table 13. Results of Simultaneous Regression Coefficient Significance Test (F Test)

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1789295417269821.500	3	596431805756607.100	159,985	.000b
	Residual	357892082730178.440	96	3728042528439.359		
	Total	2147187500000000.000	99			

a. Dependent Variable: Income (Y)
b. Predictors: (Constant), Industrial Agglomeration (X3), Business Experience (X2), E-commerce (X1)

Source: Processed Primary Data, (2025)

Based on the table, the F count is 159.985 with a significance value of 0.000, which means that the significance value of F is less than 0.05 and the F count (159.985) is greater than the F table (2.47), so it can be concluded that the variables of E-commerce Use (X1), Business Experience (X2) and Industrial Agglomeration (X3) simultaneously have an effect on the Income of Fashion MSMEs in Denpasar City (Y).

Partial Influence Test (t-Test)

Table 14. Results of Partial Regression Coefficient Significance Test (t-Test)

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13825000.000	193081.395		71,602	.000
	E-commerce(X1)	1854012.035	419365.956	.398	4.421	.000
	Business Experience (X2)	977194.716	265373.667	.210	3,682	.000
	Industrial Agglomeration (X3)	1781392.014	440940.449	.383	4,040	.000

a. Dependent Variable: Income

Source: Processed Primary Data, (2025)

The calculated t value obtained was 4.040 > 1.985 and the significance value was 0.000, meaning that the variableIndustrial Agglomeration(X3) has a partial positive and significant influence on the income of MSMEs in the Fashion Sector in Denpasar City (Y).

Descriptive Analysis Demographic characteristics based on Age, Education, and Experience underlie the use of E-commerce.

Table 15. Results of Descriptive Analysis of Demographic Characteristics based on Age underlying the use of E-commerce.

No.	Demographic Characteristics (Age)	Respondents	
		Frequency	Percentage
	No Effect At All	0	0.0
	Not Much Influential	0	0.0
	Influential	37	37.0
	Very influential	63	63.0
Total		**100**	**100**

Source: Processed Primary Data, (2025)

Table 16. Results of Descriptive Analysis of Demographic Characteristics (Education) underlying the use of E-commerce.

No.	Demographic Characteristics (Age)	Respondents	
		Frequency	Percentage
	No Effect At All	0	0.0
	Not Much Influential	0	0.0
	Influential	38	38.0
	Very influential	62	62.0
Total		**100**	**100**

Source: Processed Primary Data, (2025)

Table 17. Results of Descriptive Analysis of Demographic Characteristics Based on Experience Underlying E-commerce Use.

No.	Demographic Characteristics (Age)	Respondents	
		Frequency	Percentage
	No Effect At All	0	0.0
	Not Much Influential	0	0.0
	Influential	42	42.0
	Very influential	58	58.0
Total		**100**	**100**

Source: Processed Primary Data, (2025)

Discussion of Research Results
The Influence of E-commerce Usage (X1) on the Income of Fashion MSMEs in Denpasar City

The results of the analysis show that the variable of E-commerce Usage (X1) has a t-value of 4.421 which is greater than the t-table of 1.985 with a significance value of 0.000. This indicates that the Use of E-commerce has a partial positive and significant effect on the income of MSMEs in the Fashion Sector in Denpasar City. The results of this test

mean that the more intensive the use of E-commerce in MSME business operations, the greater the increase in income obtained. This is due to the ease of reaching customers, the effectiveness of digital marketing strategies, and lower operational cost efficiency compared to conventional sales methods. The majority of respondents in this study used various E-commerce platforms such as Shopee, Tokopedia, Facebook, and Instagram as the main media in marketing their products. Based on

The Influence of Business Experience (X2) on the Income of Fashion MSMEs in Denpasar City

Based on the results of partial regression analysis (t-test), the t-count value is 3.682 which is greater than the t-table of 1.985. In addition, the significance value obtained is 0.000, which is smaller than the significance level (α) of 0.05. This shows that the Business Experience variable (X2) has a positive and significant influence on the Income of Fashion MSMEs in Denpasar City (Y).

These results indicate that the longer an MSME operates, then the income generated also increases from the previous one because of the increasing ability in managing their business so that it can be more advanced than before, and can bring up innovations to develop their business also because they know more about the market situation and conditions Alkumairoh & Warsitasari (2022). This can be explained through several factors. First, longer Business Experience allows MSMEs to build experience in managing a business, understand market preferences, and increase operational efficiency. Longer experience also helps business owners develop more effective marketing strategies, understand industry trends, and optimize the supply chain.

Second, MSMEs that have been operating for a longer period of time tend to have a wider business network, both with suppliers, customers, and other business partners. This strong network provides a competitive advantage for business actors in expanding the market and increasing revenue. In addition, customer trust in MSMEs that have been established for a long time tends to be higher compared to newly developing businesses, so it can increase customer loyalty and increase sales volume.

Third, longer business stability also allows MSMEs to more easily gain access to capital or business credit. Many financial institutions are more willing to provide loans to businesses that have been operating for a certain period of time because they are considered more stable and have a clearer financial track record. Access to this capital allows MSMEs to expand their businesses, increase production capacity, and expand their marketing reach.As for the opinion of one of the respondents from South Denpasar District, namely Sister Aryati who is 52 years old. In an interview conducted on February 27, 2025, she stated that:

"Yes, it is very influential. With the increasing Business Experience, I increasingly understand customer tastes, expand my network, and add variations of products that are in demand in the market. That is also what makes customers increasingly trust me and buy more. In the past, my income was unstable, sometimes I lost because I didn't know what a good marketing strategy was. Now with the experience I have, I can determine which products are the best-selling and the best way to market the goods."

The Influence of Industrial Agglomeration (X3) on the Income of Fashion MSMEs in Denpasar City

In addition, the results of the regression analysis also show that the Industrial Agglomeration variable (X3) has a positive and significant influence on the Income of Fashion MSMEs in Denpasar City. This is evidenced by the t-value of 4.040 which is greater than the t-table of 1.985, and the significance value of 0.000 which is smaller than $\alpha = 0.05$.

The existence of industrial agglomeration can increase production efficiency through easy access to raw materials, labor, and relevant technology. Duy, L. & Cassells, D. (2022) found that companies located in areas with high industrial concentrations tend to show greater innovation efforts. This is in line with research conducted by Yansyah, et. al (2023) which states that business location has a significant effect on the success of MSME businesses. In addition, a concentrated industrial environment allows for the exchange of information and knowledge between business actors, so that it can encourage innovation and improve product quality.

In addition, industrial agglomeration also increases the attractiveness of an area to consumers, thus supporting increased demand and sales of Fashion products. Another factor that plays a role

is the spillover effect, where business actors can benefit each other through cooperation, sharing customers, and creating a more competitive business ecosystem. The opinion of one of the respondents from East Denpasar District, namely Sister Ni Wayan Sarini, SE, who is 52 years old. In an interview conducted on February 27, 2025, she stated that:

"In my opinion, joining an industrial area is very profitable, especially side by side like this, close to restaurants and others, so usually guests who have finished eating will definitely want to visit and see the products in my shop, but we must be ready to adapt and compete. Take advantage of existing networks, collaborate with other businesses, and continue to improve product quality so that we can survive and grow."

Results of Discussion Descriptive Analysis Demographic characteristics based on Age, Education, and Experience underlie the use of E-commerce.

Demographic characteristics, especially age, play a significant role in determining technology adoption patterns, including E-commerce. Based on Table 4.31, it indicates that Demographic Characteristics based on Age underlie the use of E-commerce. Age can reflect the level of digital literacy, preferences in transactions, and the purchasing power of consumers and business actors in utilizing digital platforms for economic activities. In the context of MSMEs in the Fashion sector in Denpasar City, the use of E-commerce as a means of marketing and business transactions is likely to be influenced by the age of business actors. The younger generation is generally more adaptive to technological changes, while the older generation may be more careful in adopting digital systems. Based on the results of an interview with one of the MSME actors, namely Mrs. Ratih who is 45 years old, she is of the opinion that:

"I actually feel more comfortable selling directly in the store, but because now many customers choose to shop online, I started trying to use E-commerce since 2017. At first it was a bit difficult because I didn't understand how to manage an online store, but after learning from my child, now I'm used to it. I think age does have a big influence, if it weren't for my child who is still young and understands technology, I might not use E-commerce"

Based on the interview results, MSME actors who actively use E-commerce are in the age range of 25-45 years. This age group tends to be more open to digitalization and has sufficient experience in business and in using digital technology as a marketing strategy. This is in line with the findings of Riswandi & Hamidi (2021) that the age difference between young people and adults in terms of technological readiness, of course young people are faster in responding to technology, because they have a higher attitude of optimism and innovation, even they are part of the generation born in the era of technological and information development.

Demographic characteristics of entrepreneurs, especially education level, play a role in determining the extent to which they utilize E-commerce. Entrepreneurs with higher levels of education tend to be more adaptive to the development of digital technology (Buulolo M & Buulolo A 2023). They understand the benefits of E-commerce more quickly and have skills in managing businesses online. Higher education provides broader insights into digital marketing strategies, utilization of sales data, and the use of various digital platforms to increase business competitiveness..The higher the level of education of entrepreneurs, the more likely they are to utilize E-commerce in their business operations (Irayani & Ayningsasi 2021). In addition, they also have greater access to information and training, either through seminars, courses, or professional networks, which further strengthens their ability to optimize E-commerce.

In contrast, entrepreneurs with lower levels of education generally face challenges in understanding and managing E-commerce. Although many of them have started to utilize digital platforms for marketing and transactions, limitations in digital literacy often become obstacles. Some entrepreneurs in this category rely on the help of family members or younger employees to manage their online stores. Sister Ni Putu Mira Darmayanti, 28, said:

"Very influential. From my experience interacting with fellow UMKM players, those with higher education are generally quicker in understanding and adopting E-commerce. They tend to be more open to technology, learn faster, and have more effective marketing strategies."

This statement reinforces the fact that education level plays an important role in the success of MSME digitalization. Business actors with higher education are more adaptive to technology, more strategic in marketing, and faster in mastering new skills. Therefore, digital assistance and training for MSME actors with lower education is very necessary, so that they can also utilize E-commerce optimally to increase their income and business competitiveness.

4. CONCLUSION

Based on the analysis presented in the previous chapter, several conclusions can be drawn to address the research questions. First, the use of e-commerce, business experience, and industrial agglomeration simultaneously have a positive and significant effect on the income of fashion MSMEs in Denpasar City. Second, these variables also individually (partially) have a positive and significant influence on MSME income. Lastly, the demographic characteristics of MSME owners—such as age, education, and experience—can serve as a basis for the adoption of e-commerce in their business operations.

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