

Polarization of Increasing Residential Settlements on the Development of MSMEs in Medan Tuntungan District

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ABSTRACT

Micro, Small, and Medium Enterprises (MSMEs) are one of the key pillars supporting regional economic growth while also contributing to the improvement of community living standards. The development of MSMEs is influenced not only by internal business factors but also by population dynamics and the characteristics of residential areas, particularly in urban settings. This study aims to examine how the polarization of increasing residential settlements affects the development of MSMEs in Medan Tuntungan District. The analysis focuses on the relationship between population growth and the number of MSMEs in relation to MSME income, as well as comparing MSME development across areas with different levels of residential density.

This research adopts a descriptive quantitative approach and applies multiple linear regression analysis. The data consist of primary data collected through questionnaires and interviews with 100 MSME operators in Medan Tuntungan District, along with secondary data obtained from relevant institutions and various literature sources. The independent variables in this study include population growth and the number of MSMEs, while the dependent variable is MSME income.

The results indicate that population growth has a positive and significant effect on MSME income. In addition, the number of MSMEs also shows a positive and significant influence on MSME income. Simultaneously, both independent variables significantly affect MSME income in Medan Tuntungan District. These findings suggest that the expansion of residential settlements can serve as an opportunity for MSME development when supported by appropriate policies and empowerment initiatives.

Introduction

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in national economic development. Data from the Ministry of Cooperatives and Small and Medium Enterprises show that MSMEs absorb more than 97% of the workforce and contribute

approximately 60% to the national Gross Domestic Product (GDP). This contribution confirms the position of MSMEs as a primary driver of the economy. However, development growth across various sectors has not yet been able to fully keep pace with the continuously increasing labor force.

Economic growth is defined as an increase in an economy's ability to produce goods and services over a certain period (Hasanah, Faried, & Sebayang, 2024). In this study, economic growth is measured using Gross Domestic Product (GDP) for the 2019–2023 period as an indicator of total production value to assess the development of economic activities and the level of societal welfare.

Tabel 1.1
Population in Medan Tuntungan District

Population by Subdistrict in Medan Tuntungan	
District	Population
Ladang Bambu	5.522
Sidomulyo	2.850
Lau Cih	2.369
Namo Gajah	3.200
Kemenangan Tani	5.763
Simalingkar B	8.516
Simpang Selayang	21.897
Tanjung Selamat	16.945
Mangga	32.122
Total	99.184

Source: Department of Population and Civil Registration of Medan City (2023)

Research Methodology

Micro, Small, and Medium Enterprises (MSMEs)

MSMEs are economic activities carried out by the community on a limited scale and meet certain criteria related to assets, annual turnover, and number of employees in accordance with applicable laws and regulations. MSMEs are generally managed by individuals, households, or small business entities and are classified based on asset value, turnover, and workforce size.

MSME Problems

MSME actors face various obstacles in running their businesses. Common issues include limited capital, low sales, difficulties in obtaining raw materials, weak marketing, limited workforce, and lack of managerial skills as well as poorly organized bookkeeping

systems. Capital constraints are mainly influenced by high loan interest rates and low understanding of financial institution procedures.

MSME Empowerment

MSME empowerment is a systematic effort to enhance the capacity and independence of business actors in managing their resources. It aims to strengthen the role of MSMEs in driving economic growth, expanding employment opportunities, and increasing competitiveness and community income, especially among low-income groups.

Objectives of MSMEs

Based on Law Number 20 of 2008, MSME development aims to strengthen the national economy through business growth based on economic democracy and justice principles. Empowerment is directed toward creating a balanced economic structure, increasing independence and competitiveness, and strengthening MSMEs' role in regional development through job creation, income distribution, and poverty reduction.

Settlements

Settlements are part of residential environments consisting of housing units equipped with infrastructure, facilities, and public utilities that support social and economic activities in both urban and rural areas.

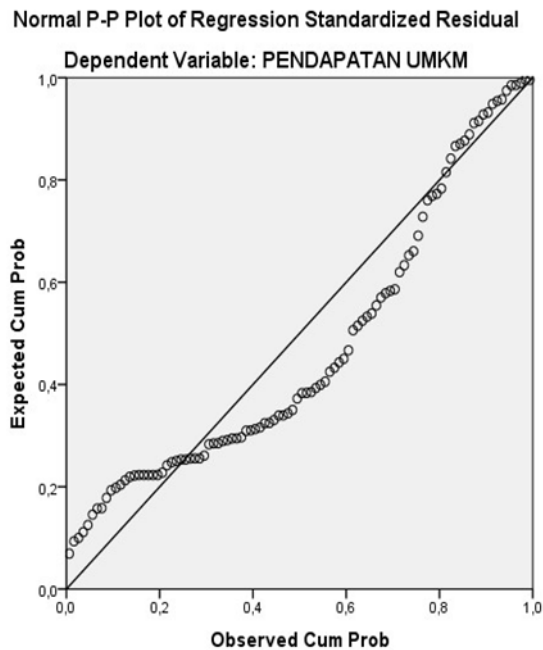
Population

Population refers to individuals or groups residing in a particular area over a certain period. Population growth studies have developed since the early use of demographic statistical approaches, which analyze population size and distribution through records and census data.

Results and Discussion

Normality Test

The normality test is used to determine whether the regression model variables are normally distributed. A good regression model should have a normal or near-normal distribution.



Based on the histogram and normal P-P plot, the data in this study are normally distributed, indicated by a symmetrical, bell-shaped curve centered in the middle. The plotted points are close to the diagonal line, confirming normal distribution.

		Coefficient						
				Standardized				
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,819	,855	-,958	,341			
	PERTUMBUHAN JUMLAH PENDUDUK	,342	,136	,265	2,518	,013	,374	2,672
	UMKM	,603	,116	,546	5,186	,000	,374	2,672

a. Dependent Variable: PENDAPATAN UMKM

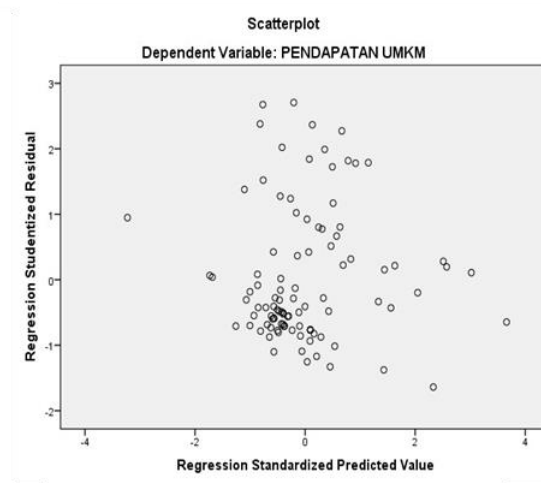
Multicollinearity Test

Based on the table above, it can be concluded that the tolerance values meet the required criteria. The tolerance values for all variables (population growth and MSMEs) satisfy the multicollinearity test requirements. The Variance Inflation Factor (VIF) values also meet the required criteria, which must be less than 10.0. It can be seen that the VIF

values for all variables (population growth and MSMEs) indicate that they are free from multicollinearity.

Heteroscedasticity Test

The heteroscedasticity test aims to determine whether there is an inequality of variance in the residuals from one observation to another in the regression model. A good regression model is one that does not exhibit heteroscedasticity. The results of the heteroscedasticity test can be seen in the following figure



a. Multiple Linear Regression

Based on the SPSS output from the coefficients table above, the regression equation is as follows:

Coefficientsa								
Model		Unstandardized		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,819	,855		-,958	,341		
	PERTUMBUHAN JUMLAH PENDUDUK	,342	,136	,265	2,518	,013	,374	2,672
	UMKM	,603	,116	,546	5,186	,000	,374	2,672

a. Dependent Variable: PENDAPATAN UMKM

$$Y=a+b1.X1+b2.X2$$

Based on the multiple linear regression equation above, it can be explained as follows:

1.The constant value (a) is positive at 7.725. This positive sign indicates a direct relationship between the independent variables and the dependent variable, namely MSME income. This implies that when the independent variables are assumed to be zero, the MSME income still has a positive baseline value.

b. t-Test (Partial Hypothesis Test)

The t-test is used to determine whether there is a partial effect of the independent variables (X) on the dependent variable (Y). In this study, the t-test is applied to test hypotheses H1 to H10.

Coefficientsa								
				Standardized				
1	PERTUMBUHAN JUMLAH PENDUDUK	,342	,136	,265	2,518	,013	,374	2,672

a. Dependent Variable: PENDAPATAN UMKM

a. The Effect of Population Growth on MSME Income

The t-test results show a t-value of 2.518 with a significance level of 0.013 (< 0.05). Based on these results, H₀₁ is rejected and H_{a1} is accepted, indicating that population growth has a significant effect on MSME income.

b. The Effect of Price on Culinary MSME Income

Based on the test results, the t-value is 5.186 with a significance level of 0.000 (< 0.05). Therefore, H_{a2} is accepted and H₀₂ is rejected, indicating that the price variable has a significant effect on the income of culinary MSMEs.

c. Uji – F (Uji Hipotesis Simultan)

ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1321,962	2	660,981	72,001	,000b
	Residual	890,478	97	9,180		
	Total	2212,440	99			
a. Dependent Variable: PENDAPATAN UMKM						
b. Predictors: (Constant), UMKM, PERTUMBUHAN JUMLAH PENDUDUK						

Based on the results of the simultaneous test (F-test), the F-value is 72.001 with a significance level of 0.000 (< 0.05). These results indicate that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. Therefore, the multiple linear regression model used is considered appropriate for analysis. Furthermore, the independent variables, namely population growth and the number of MSMEs, simultaneously have a significant effect on MSME income.

d. Uji – D

Model Summaryb					
			Adjusted R Square	Std. Error of	
1	,773a	,598	,589	3,02988	1,716
a. Predictors: (Constant), UMKM, PERTUMBUHAN JUMLAH PENDUDUK					
b. Dependent Variable: PENDAPATAN UMKM					

The Adjusted R Square value of 0.589 or 58.9% indicates that the variation in MSME income can be explained by the variables of population growth and the number of

MSMEs. This result suggests that both variables have a fairly strong and relevant contribution in influencing MSME income in Medan Tuntungan District.

Conclusion

Based on the analysis and discussion above, the following conclusions can be drawn:

1. The results indicate that the two variables—population growth and MSMEs—have a significant effect on MSME income. Population growth significantly influences MSME income, and MSMEs also have a significant impact on MSME income.
2. The results of the multiple linear regression analysis show that population, MSMEs, and MSME income simultaneously have a significant effect on the dependent variable, namely MSME income.

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