International Journal for Advanced Research

Research Article

The Impact of Economic Growth and Minimum Wages on Poverty in Medan City

Nurita Pasaribu [1]* , Hotman Siboro [2] , Tamaria Br Sidebang[3], Vidia Wardana[4]

[1,2,3,4] Universitas Negeri Medan, Indonesia

*Correspondence: E-mail: nuritapasaribu@mhs.unimed.ac.id

Keywords:	Abstract
Economic Growth, Minimum Wage, Poverty, Medan City.	This study aims to analyze the effect of economic growth and minimum wages on poverty rates in Medan City during the period 2010–2024. Poverty remains a central issue in development despite positive economic dynamics and annual minimum wage adjustments. This study uses a quantitative approach with multiple linear regression methods. Secondary data were obtained from the Central Statistics Agency (BPS), including annual data on economic growth, minimum wages, and poverty rates. The results of the analysis show that economic growth has a positive and significant effect on poverty with a significance value of 0.024, indicating that economic growth has not reached all levels of society evenly. Conversely, minimum wages do not have a significant effect on poverty, indicated by a significance value of 0.880. Simultaneously, both variables do not have a significant effect on poverty (sig. = 0.068). The coefficient of determination (R^2) value of 0.361 indicates that the model is only able to explain 36.1% of the variation in poverty rates. This finding emphasizes the need for poverty alleviation policies that are inclusive, integrated, and oriented towards equitable distribution of development results.

Introduction

Poverty is one of the main problems in national development that is complex and multidimensional. In Indonesia, although various efforts have been made to reduce poverty rates, in reality this problem is still a serious challenge, especially in urban areas such as Medan City. As a metropolitan city and the largest economic center on the island of Sumatra, Medan faces high development pressures, but this is not always in line with an increase in the welfare of the community evenly. This phenomenon raises a fundamental question: have economic growth and minimum wage policies been effective in reducing poverty rates in the region?

Economic growth, in theory, is an important indicator that reflects the increase in economic activity and production capacity of a region. Ideally, economic growth will create jobs, increase people's income, and reduce poverty. However, the reality on the ground shows that economic growth is not always directly proportional to the decrease in poverty rates. Aritonang and Nopeline (2024), in their research on the city of Medan, found that economic growth did not have a significant effect on poverty rates. They concluded that the economic growth that occurred tended to be non-inclusive, where the benefits were only enjoyed by a small

portion of the community who had access to capital and economic resources (Aritonang & Nopeline, 2024). This shows that without equal distribution of development results, economic growth can actually widen the gap in inequality.

On the other hand, the minimum wage policy is an important instrument in labor protection that aims to guarantee a decent income for workers. The minimum wage is expected to increase the purchasing power of low-income people and contribute to reducing poverty. However, the effectiveness of this policy is still debated. In some areas, increasing the minimum wage is considered capable of reducing poverty rates, while in other areas it can actually cause contraction in the informal sector and reduction of the workforce due to the high burden of production costs. Simbolo et al. (2023) showed that in general in Indonesia, increasing the minimum wage contributes positively and significantly to reducing poverty rates, although with the note that the impact varies depending on the local economic structure and the dominant sector in the region (Simbolo et al., 2023). Medan City has unique social and economic characteristics, dominated by the trade, services, and industry sectors. During the period 2010–2024, the city experienced various dynamics in terms of economic growth and adjustments to the provincial minimum wage which is set annually. However, the poverty rate in Medan City has not experienced a consistent decline. This indicates that even though there is economic growth and an increase in the minimum wage, these policies are not necessarily successful in reducing poverty effectively.

This condition raises the need for more in-depth research to determine the extent to which economic growth and minimum wage policies actually affect poverty in Medan City. By understanding this relationship empirically, local governments are expected to be able to design more inclusive economic policies that favor vulnerable groups, in order to realize equitable development. This research is also expected to provide a scientific contribution as a basis for evaluating the effectiveness of economic and social policies that have been implemented in Medan City for more than the last decade.

With this background, it is important to conduct a study entitled "The Effect of Economic Growth and Minimum Wages on Poverty in Medan City for the Period 2010–2024" to provide a more comprehensive and data-based understanding of the issue of poverty in urban areas of Indonesia.

Table 1
Data on Economic Growth, Minimum Wages and Poverty in Medan City

Years	Economic Growth	Minimum wage	Poverty
2010	6,94	21,55	9,58
2011	7,79	-5,86	10,05
2012	7,66	24,08	9,63
2013	5,36	28,40	9,33
2014	6,05	-8,74	9,64
2015	5,74	35,26	9,12
2016	6,27	11,50	9,41
2017	5,81	11,35	9,30
2018	5,92	8,72	8,25
2019	5,93	8,04	8,08
2020	-1,98	8,51	8,01
2021	2,62	3,33	8,34
2022	4,71	1,22	8,07
2023	5,04	-19,61	8,00
2024	5,07	39,08	7,94

Data from the Central Statistics Agency (BPS) shows that the percentage of poor people in Medan City has decreased from 8.00% in 2023 to 7.94% in 2024, with the absolute number of poor people reaching 187.04 thousand people. Despite the decline, this figure still shows that poverty remains a significant issue in Medan City.

Research by Wulandari et al. (2025) analyzed the effect of economic growth rate, regional minimum wage, and unemployment rate on poverty in North Sumatra during the period 2001–2021. The results of the study showed that partially, the economic growth rate and regional minimum wage have a negative and significant effect on the poverty rate. This means that increasing economic growth and minimum wages tend to reduce the poverty rate. However, the unemployment rate does not have a significant effect on poverty. Simultaneously, the three variables have a significant effect on poverty with a contribution of 78.26%.

In addition, research by Manullang et al. (2024) found that the regional minimum wage (UMR) has a significant negative effect on poverty in North Sumatra, while income inequality has no significant effect. Simultaneously, UMR and income inequality affect poverty with a contribution of 20.94%.

Hypotheses Development
The issue of poverty in urban areas such as Medan City is still a strategic challenge despite relatively stable economic growth and an increase in the minimum wage every year. Theoretically, economic growth should be able to reduce poverty levels through job creation and increasing community income. However, in practice, non-inclusive economic growth can actually increase inequality and widen the poverty gap. This happens if growth is only enjoyed by certain groups of people who have access to economic resources.

Meanwhile, the minimum wage as an instrument of employment policy aims to guarantee a decent income for workers, especially low-income groups. In various studies, the increase in the minimum wage shows a negative relationship with poverty, but its influence is highly dependent on the structure of the labor market, the proportion of the informal sector, and worker productivity. Based on this framework, the following research hypothesis is developed:H_1:
- Economic growth has a significant effect on poverty levels in Medan City.
- H_2: Minimum wages have a significant effect on poverty levels in Medan City.
- H_3: Economic growth and minimum wages simultaneously have a significant effect on poverty levels in Medan City.

Method
1. Type of Research
This research uses a quantitative approach with an associative research method. This method aims to determine the relationship or influence between the independent variables, namely Economic Growth (X1) and Minimum Wage (X2), on the dependent variable, namely Poverty (Y).

2. Location and Time of Research
The research was conducted in Medan City, North Sumatra Province. The data used covers the period 2010 to 2024, which is taken from official sources such as the Central Statistics Agency (BPS) and related agencies.

3. Population and Sample
The population in this study is annual data on Economic Growth, Minimum Wages, and Poverty levels in Medan City during the period 2010–2024. This study uses a saturated sampling technique (census sampling),

where the entire population is taken as a research sample because the amount of annual data is relatively limited (15 data).

4. Types and Sources of Data

The data used in this study are secondary data obtained from government agencies, such as the Medan City Central Statistics Agency (BPS), annual economic reports, and other relevant official publications. The data collected include:

- Economic Growth (in percent)
- Minimum Wage (in rupiah)
- Poverty Rate (in percent)

5. Data Collection Technique

The data collection technique used is documentation, namely by collecting historical data from official reports and statistical publications related to Economic Growth, Minimum Wages, and Poverty in Medan City.

6. Data Analysis Technique

The collected data were analyzed using multiple linear regression analysis to test the effect of Economic Growth and Minimum Wages on Poverty. Classical assumption tests, such as normality, multicollinearity, heteroscedasticity, and autocorrelation tests, were also carried out to ensure that the regression model met the BLUE (Best Linear Unbiased Estimator) requirements.

In addition, a partial hypothesis test (t-test) was carried out to determine the effect of each independent variable on the dependent variable individually, and a simultaneous test (F-test) to test the effect together. The coefficient of determination (R^2) was also measured to determine how much the independent variable contributed to the dependent variable in this research model.

Results And Discussion
Result
1. Multiple Linear Regression Test

Table 2
Multiple Linear Regression Test Results

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1(Constant)	781.897	43.560		17.950	.000		
Pertumbuhan Ekonomi	.192	.075	.596	2.574	.024	.993	1.007
Upah Minimum	.002	.011	.036	.154	.880	.993	1.007

a. Dependent Variable: Kemiskinan

Based on the results above, the regression equation is obtained:

Y= 781.897 + 0.192X1 + 0.002X2

The meaning of this regression equation can be described as follows
1. The constant value of 781.897 indicates that if Economic Growth and Minimum Wage are zero, then the Poverty rate is estimated at 781.897
2. The Economic Growth variable has a coefficient value of 0.192 with a significance value of 0.024 (less than 0.05), which means it has a positive and significant effect on Poverty. This means that every 1% increase in economic growth actually increases poverty by 0.192 units. This can happen if economic growth is uneven or only enjoyed by certain groups.

3. The Minimum Wage variable has a coefficient of 0.002 with a significance value of 0.880 (greater than 0.05), which means it does not have a significant effect on Poverty. In other words, the increase in the minimum wage in this period was not strong enough to directly affect the poverty rate.

2. Hypothesis Testing
a. Partial Hypothesis Testing (t-Test)

Table 3
Partial Hypothesis Test Results (t-Test)

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1(Constant)	781.897	43.560		17.950	.000		
Pertumbuhan Ekonomi	.192	.075	.596	2.574	.024	.993	1.007
Upah Minimum	.002	.011	.036	.154	.880	.993	1.007

a. Dependent Variable: Kemiskinan

With n = 15 and k = 2, the ttable value is 2.160, then:
a. The Economic Growth variable obtained a tcount of 2.574, which is greater than the ttable (2.574 > 2.160) and its significance value is 0.024 < 0.05 so that Ha is accepted. This means that the Economic Growth variable has a significant influence on Poverty in Medan City.
b. The Minimum Wage variable obtained a tcount of 0.154, which is smaller than the ttable (0.154 < 2.160) and its significance value is 0.880 > 0.05 so that Ha is rejected. This means that the Minimum Wage variable does not have a significant influence on Poverty in Medan City.

b. Simultaneous Hypothesis Test (F Test)

Table 4
Results of Simultaneous Hypothesis Testing (F Test)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29220.989	2	14610.495	3.384	.068[b]
	Residual	51803.011	12	4316.918		
	Total	81024.000	14			

a. Dependent Variable: Kemiskinan
b. Predictors: (Constant), Upah Minimum, Pertumbuhan Ekonomi

With n = 15 and k = 2, the Ftable is 4,670, so based on the results of the ANOVA test, the Fcount value of 3,384 is smaller than Ftable (3,384 <4,670) and the significance value (Sig.) Of 0.068 is greater than 0.05, so statistically the regression model is not significant simultaneously. This means that together, the variables of Economic Growth and Minimum Wage do not have a significant effect on Poverty in Medan City during the period 2010–2024. Although one of the variables (economic growth) shows a significant effect partially, overall this model is not strong enough to explain variations in poverty levels.

3. Coefficient of Determination

Table 5
Results of the Coefficient of Determination Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.601[a]	.361	.254	65.70325	.925

a. Predictors: (Constant), Upah Minimum, Pertumbuhan Ekonomi
b. Dependent Variable: Kemiskinan

The results of the analysis show that the R Square value is 0.361 or 36.1%, which means that the variables of Economic Growth and Minimum Wage together are able to explain 36.1% of the variation in the Poverty rate in Medan City during the period 2010–2024. The rest, which is 63.9%, is explained by other factors not included in this model.

Discussion

Based on the research results, it is known that economic growth has a positive and significant effect on the poverty rate in Medan City in 2010–2024. This means that the increase in economic growth is actually followed by an increase in the poverty rate. This phenomenon indicates that the economic growth that occurs in Medan City is not inclusive or equal for all levels of society, especially the poor. These results are in line with the findings of Wahyudi and Rejekingsih (2023) which state that economic growth does not automatically reduce the poverty rate if it is not accompanied by fair income distribution, creation of quality jobs, and development that focuses on strengthening human resources. They stated that elitist economic growth, only enjoyed by the upper economic group, actually widens the social gap and encourages increased poverty.

Furthermore, the results of this study also show that the minimum wage has no significant effect on poverty. This shows that the minimum wage policy in Medan City has not been effective as an instrument for poverty alleviation. This is consistent with the findings of Amalia et al. (2024) who studied the effect of the minimum wage in Aceh Province and stated that although in theory an increase in the minimum wage can increase people's purchasing power, in practice the effect is not very significant in reducing poverty, especially if it is not accompanied by increased productivity and expansion of formal employment opportunities. In many cases, the increase in the minimum wage only applies to some formal workers, while the majority of the poor work in the informal sector which is not covered by the policy.

Radityana et al.'s (2023) research in Bali Province also supports the importance of other variables such as the Human Development Index (HDI) in reducing poverty. They found that the minimum wage has a significant effect on poverty only if it is followed by an increase in the HDI. In the context of Medan City, this confirms that an increase in the minimum wage without being accompanied by an increase in the quality of education, health, and people's purchasing power will not have a significant impact on reducing poverty rates.

Thus, the results of this study confirm that economic development policies in Medan City need to be directed at inclusive and equitable economic growth, accompanied by poverty alleviation strategies that do not only rely on increasing minimum wages, but also include improving the quality of human resources, creating productive jobs, and equalizing development results across all levels of society.

Conclusion

Based on the results of multiple linear regression analysis on data from 2010 to 2024, it was obtained that the variables of economic growth and minimum wages together were only able to explain 36.1% of the variation in the poverty rate in Medan City. This is indicated by the coefficient of determination (R Square) of 0.361. Thus, there is still 63.9% of the variation in the poverty rate influenced by other variables outside this research model, such as inequality in income distribution, education level, unemployment, social infrastructure

conditions, and the effectiveness of government social programs. These findings confirm that although economic growth and minimum wage policies play a role in poverty dynamics, their aggregate contribution is relatively limited. Therefore, poverty alleviation in Medan City requires a more comprehensive and integrated multidimensional approach. Local governments are expected to not only focus on macroeconomic growth, but also pay attention to aspects of equitable distribution of development outcomes, inclusive job creation, improving the quality of human resources, and empowering the informal sector which is often the mainstay of poor people's lives. Thus, the results of this study provide important implications for the formulation of more effective and sustainable public policies in an effort to reduce poverty levels in urban areas such as Medan City.

References

Aritonang, M. N., & Nopeline, N. (2024). Dampak Pertumbuhan Ekonomi Terhadap Persentase Penduduk Miskin Kota Medan Tahun 2001–2021.

Simbolo, C. M., Nisa, F., Pinem, H. A., Alwi, H., Purnomo, D., Rinaldi, M., & Rozaini, N. (2023). Analisis Pengaruh Modal Manusia dan Upah Minimum Terhadap Kemiskinan di Indonesia.

Wulandari, M., Bakara, S., & Suharianto, J. (2025). Analisis Pengaruh Laju Pertumbuhan Ekonomi, Upah Minimum Regional Dan Pengangguran Terhadap Tingkat Kemiskinan Di Sumatera Utara Tahun 2001–2021. *ULIL ALBAB : Jurnal Ilmiah Multidisiplin* , *4* (5), 1333–1357.

Manullang, A., Pasaribu, R., Nabillah, R., Maipita, I., & Rinaldi, M. (2024). Analisis Pengaruh Ketimpangan Pendapatan dan Upah Minimum Regional Terhadap Kemiskinan di Sumatera Utara. *Journal of Humanities Education Management Accounting and Transportation*, *1*(2), 764-772.

Wahyudi, D., & Rejekingsih, T. W. (2023). Analisis Pertumbuhan Ekonomi dan Kemiskinan di Indonesia. Jurnal Kajian Ekonomi, 10(2).

Amalia, R., et al. (2024). Pengaruh Pendidikan dan Upah Minimum Terhadap Kemiskinan di Provinsi Aceh. Jurnal Ekonomi dan Pembangunan Indonesia, 5(1).

Radityana, I. D. G. M., Djayastra, I. K., Danendra, A. A. N. B., & Wisnu, N. (2023). Pengaruh Upah Minimum, Indeks Pembangunan Manusia dan Pengangguran Terbuka terhadap Jumlah Kemiskinan di Provinsi Bali. Jurnal Kajian Ekonomi dan Manajemen Indonesia (JKEMI), 1(1).

Yacoub, Y., & Firdayanti, M. (2019). Pengaruh Inflasi, Pertumbuhan Ekonomi Dan Upah Minimum Terhadap Pengangguran Di Kabupaten/Kota Provinsi Kalimantan Barat. *Prosiding Satiesp*, 132-142.

UJUNG, M. S. B. (2021). Analisis pengaruh Pertumbuhan Ekonomi, Pengangguran dan Upah Minimum Terhadap Jumlah Penduduk Miskin Tahun 2000-2020. *Journal of Economic and Business*, *3*(1), 23-40.

Fajriansyah, S., & Chandriyati, I. (2022). Analisis Pengaruh Pertumbuhan Ekonomi, Upah Minimum Provinsi (UMP) dan Tingkat Pengangguran terhadap Tingkat Kemiskinan di Provinsi Kalimantan Selatan. *JIEP: Jurnal Ilmu Ekonomi Dan Pembangunan*, *5*(2), 558-570.

Siregar, T. H., Lubis, F. A., & Inayah, N. (2023). Analisis Pengaruh Produk Domestik Regional Bruto (PDRB), Upah Minimum Regional (UMR) dan Tingkat Pengangguran Terbuka (TPT) Terhadap Kesejahteraan Dalam Perspektif Ekonomi Islam di Provinsi Sumatera Utara. *Ekonomi Bisnis Manajemen Dan Akuntansi (EBMA)*, *4*(1), 1290-1303.

Ramdhan, D. A., Setyadi, D., & Wijaya, A. (2017). Faktor-faktor yang mempengaruhi tingkat pengangguran dan kemiskinan di kota samarinda. *Inovasi*, *13*(1), 1-18.

Kasih, V. D. A., & Yefriza, Y. (2025). Pengaruh Jumlah Penduduk, Indeks Pembangunan Manusia, Upah Minimum Provinsi, dan Pertumbuhan Ekonomi Terhadap Tingkat Kemiskinan di Pulau Sumatera. *Jesya (Jurnal Ekonomi dan Ekonomi Syariah)*, *8*(1), 276-286.

Azzwa, Z. F. (2023). *Pengaruh Pertumbuhan Ekonomi, Upah Minimum dan Tingkat Pengangguran Terhadap Kemiskinan Di Jawa Tengah Tahun 2020-2022* (Doctoral dissertation, IAIN KUDUS).

Nainggolan, L. E., Sembiring, L. D., & Nainggolan, N. T. (2021). Analisis Pengaruh Pertumbuhan Ekonomi Terhadap Indeks Pembangunan Manusia Yang Berdampak Pada Kemiskinan Di Provinsi Sumatera Utara Oleh Lora Ekana Nainggolan1. *Lenny Dermawan Sembiring2) & Nana Triapnita Nainggolan3*.

Sari, E. M. (2022). *Analisis Pengaruh PDRB Perkapita, Rata-Rata Lama Sekolah, Pengeluaran Perkapita, dan Upah Minimum Kabupaten/Kota Terhadap Jumlah Penduduk Miskin: Studi Panel Di Provinsi Jawa Tengah Tahun 2018-2020* (Doctoral dissertation, Universitas Muhammadiyah Surakarta).

Maipita, I. (2013). Simulasi dampak kenaikan upah minimum terhadap tingkat pendapatan dan kemiskinan. *EKUITAS (Jurnal Ekonomi Dan Keuangan)*, *17*(3), 390-410.

Badan Pusat Statistik Provinsi Sumatera Utara. (12 Maret 2025). [Seri 2010] Laju Pertumbuhan Produk Domestik Regional Bruto Atas Dasar Harga Konstan 2010 Menurut Kabupaten/Kota, 2022-2024. Diakses pada 28 Mei 2025, dari https://sumut.bps.go.id/id/statistics-table/2/NzQjMg==/-seri-2010-pertumbuhan-ekonomi-atas-dasar-harga-konstan-2010-menurut-kabupaten-kota.html

Badan Pusat Statistik Provinsi Sumatera Utara. (27 Maret 2023). Upah Minimum Provinsi (UMP) dan Upah Minimum Kabupaten/Kota (UMK) menurut Kabupaten/Kota, 2021-2022. Diakses pada 28 Mei 2025, dari https://sumut.bps.go.id/id/statistics-table/2/MTg4IzI=/upah-minimum-provinsi-ump-dan-upah-minimum-kabupaten-kota-umk-menurut-kabupaten-kota.htm

Badan Pusat Statistik Kota Medan. (5 Maret 2024). Persentase Penduduk Miskin (P0) (Persen), 2022-2023. Diakses pada 28 Mei 2025, dari https://medankota.bps.go.id/id/statistics-table/2/ODkjMg==/persentase-penduduk-miskin.html

Soleh, A. (2014). Pertumbuhan ekonomi dan kemiskinan di Indonesia. EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis, 2(2).

Pratiwi, D., Sisiliana, S., Suprayetno, E., Iswara, U. S., & Rangkuty, D. M. (2023). Studi kajian tingkat kemiskinan di Kota Medan. Student Research Journal, 1(4), 142-150.

Simbolo, A., Siregar, D., & Harahap, M. (2023). Efektivitas kebijakan upah minimum terhadap kemiskinan di daerah perkotaan Indonesia. Jurnal Ekonomi dan Kebijakan Publik, 12(3), 145-160.

Kementerian Ketenagakerjaan Republik Indonesia. (2021). Laporan tahunan ketenagakerjaan Indonesia 2021.

Manullang, M., & Sembiring, E. (2024). Ketimpangan pendapatan dan kebijakan UMR terhadap kemiskinan di wilayah perkotaan. Jurnal Ekonomi Pembangunan Daerah, 10(2), 115-128.

Kementerian Perencanaan Pembangunan Nasional/Bappenas. (2022). Laporan pembangunan ekonomi dan penanggulangan kemiskinan 2022.

Romi, S., & Umiyati, E. (2018). Pengaruh pertumbuhan ekonomi dan upah minimum terhadap kemiskinan di Kota Jambi. E-Jurnal Perspektif Ekonomi Dan Pembangunan Daerah, 7(1), 1-7.

Sari, Y. A. (2021). Pengaruh Upah Minimum Tingkat Pengangguran Terbuka Dan Jumlah Penduduk Terhadap Kemiskinan Di Provinsi Jawa Tengah. Equilibrium, 10(2), 121-130.

Mahendra, A. (2016). Analisis Pengaruh Pertumbuhan Ekonomi, Pendapatan Perkapita, Inflasi Dan Pengangguran Terhadap Jumlah Penduduk Miskin Di Provinsi Sumatera Utara. Jurnal Riset Akuntansi & Keuangan, 123-148.

Budhijana, R. B. (2019). Analisis pengaruh pertumbuhan ekonomi, index pembangunan manusia (IPM) dan pengangguran terhadap tingkat kemiskinan di Indonesia Tahun 2000-2017. Jurnal Ekonomi, Manajemen Dan Perbankan (Journal of Economics, Management and Banking), 5(1), 36-44.