

Youth NEET in Indonesia: Regional Disparities and Urban Planning Implications for Malang

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Abstract

The phenomenon of youth Not in Employment, Education, or Training (NEET) poses a serious challenge to human resource development in Indonesia due to its long-term social and economic impacts. This study examines the NEET youth aged 16–30 by considering individual and environmental characteristics, including marital status, age, disability, education level, gender, region of residence, economic growth, and the interaction between marital status and age group. The study uses a quantitative approach, employing binary logistic regression, drawing on SAKERNAS 2023 data and economic growth data from 34 Indonesian provinces. The results show that all variables are significant at the 1 percent level ($p < 0.01$). Unmarried youth, younger individuals, people with disabilities, women, those with low education, and those residing in urban areas have a higher risk of being NEET. Education significantly reduces this risk. Economic growth has a limited, non-inclusive effect, and the interaction between marital status and age group reduces the probability of NEET status. This research contributes to the growing literature on regional development and planning through spatial disparities, particularly the urban-rural divide that contributes to the NEET phenomenon. The results demonstrate that place-based policies, such as strengthening the integration between education and the labor market, creating specific employment programs tailored to regional conditions, and implementing targeted interventions in rapidly growing urban areas like Malang City, are necessary to promote inclusive youth integration into the labor market.

Article Info

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1. Introduction

The phenomenon of Not in Education, Employment, or Training (NEET) in Indonesia is a serious concern, especially among young people aged 16-30. Data from the International Labour Organization (ILO) shows that Indonesia has the highest NEET rate among ASEAN countries, at 21% in 2024. Based on the 2024 Susenas data, an estimated 64.22 million people, or 22.99% of the population, are young people (aged 16-30). This indicates a significant youth population in Indonesia. The transition from youth to adulthood involves moving from one level of education to employment or higher education (Sari & Ahmad, 2021). Although Indonesia has recorded positive economic activity in recent years, the NEET rate remains high. Several studies have found that non-inclusive economic activities often lead to inequality in access to employment, especially for young people who lack sufficient work experience (Su & Wong, 2022). Furthermore, gender differences and marital status also play a role in determining young people's opportunities to participate in the workforce.

The issue of NEET is not limited to Indonesia; NEET is also a significant concern across Asia, particularly South Asia, including India, Sri Lanka, and Bangladesh. According to the ILO (2022), South Asia consistently recorded the highest youth NEET rate among its subregions before the COVID-19 crisis, averaging 29.2% from 2010 to 2019. The high NEET rate among young people in South Asia is primarily driven by young women, who recorded the highest NEET rate (by far) across all income groups, subregions, and genders, at 48.9% (Febria et al., 2022).

Pattinasarany (2024) emphasized that the risk of young people becoming NEET is closely related to key variables in the status attainment model, such as skills, education level, region of residence, gender, and social class. These findings also suggest that social inequalities are not fixed but can vary by level of education and individual characteristics of young people. In other words, education and individual attributes can strengthen or weaken the influence of social class on the likelihood of becoming NEET (SNA, 2023).

According to data from the Central Statistics Agency (BPS), the NEET rate in Indonesia has remained above 20% in recent years, making the one of the highest in Southeast Asia. Youth inactivity in the labor market and low educational attainment not only hinder economic growth but also increase the risk of long-term poverty and social inequality. Ignoring this phenomenon will lead to the loss of youth potential, poor wage income, and even permanent unemployment later in life (Gaffari & Handayani, 2019).

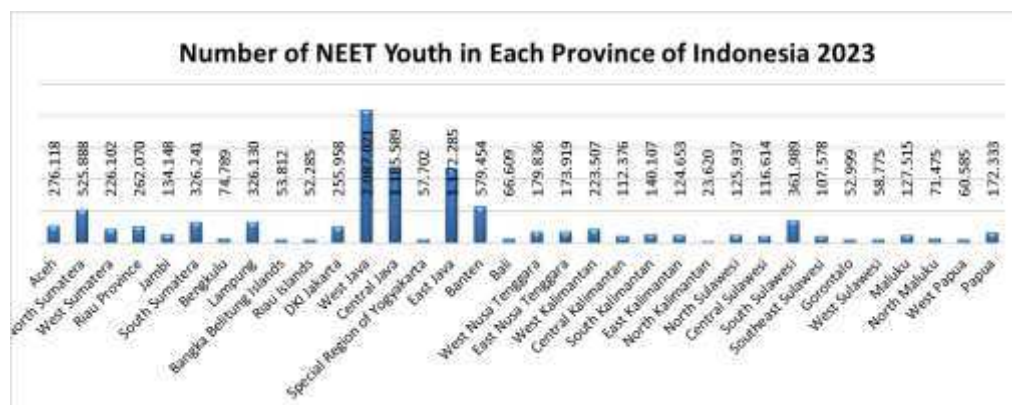


Figure 1. Number of NEET Youth in Each Province of Indonesia 2023

The graph above illustrates the striking disparity between regions, with West Java Province leading with 3,558,996 youth. Java's dominance in this statistic is further emphasized by Central Java and East Java, which rank second and third, with 2,092,554 and 2,080,362 youth, respectively. These three provinces are the only provinces in Java with NEET youth exceeding two million. This is followed by Banten Province, with 986,472 youth, and North Sumatra, with 912,998 youth, making them the provinces with NEET youth numbers approaching one million. While the majority of other provinces are in the hundreds of thousands, there is a gradual decline, starting with South Sulawesi, with 610,178 youth, and Bali, with 120,767 youth. Java's dominance in these statistics affects the NEET population

in Malang, as East Java ranks third in the number of NEET youth. As a city of education and a center of regional economic growth, it exhibits characteristics relevant to these findings. The high number of graduates each year is not always matched by the availability of suitable jobs, thus increasing the potential for a mismatch between education and job market needs. This condition is exacerbated by high urbanization and the influx of young workers from various regions, which ultimately increases job competition and the risk of some youth becoming NEET (Erdogan et al., 2021). This issue is related to regional development dynamics, particularly in urban areas, where an economic focus does not translate into inclusive employment opportunities for youth. In this regard, Malang City serves as a relevant example due to its rapid urbanization, high influx of youth, and the presence of reputable educational institutions. Therefore, a regional and urban planning perspective is necessary to understand NEET and to formulate area-based policies to address spatial inequality and youth labor market integration. The study aimed to analyze variables that may influence NEET using multilevel binary logistic regression, examining individual and household factors. The results showed that 23.65% of 15 – 24-year-olds in rural Indonesia were NEET in 2022.

The NEET classification encompasses a wide range of experiences, from unemployed graduates seeking work to early school leavers and individuals with family care responsibilities. Limited access to adequate education, employment opportunities, and training significantly affects regional economic growth, particularly in developing countries. This is explained by Székely & Karver (2021) Economic growth in developing countries has not effectively reduced the NEET rate due to insufficient investment in relevant education and job training. Theoretically, these findings align with Human Capital Theory and School-to-Work Transition Theory, which emphasize that education and skills are key determinants of labor market integration. The transition from school to work represents a critical and vulnerable phase, especially for youth with limited access to education and training. In this context, vocational education and internship experience play an important role in reducing the risk of unemployment among young people. These conditions increase young people's economic dependence on their families, exacerbate social inequality, and may lead to a persistent cycle of poverty (Adam et al., 2025).

Although various studies have examined the NEET phenomenon in Indonesia, most focus on individual factors such as education, gender, or socioeconomic status, without adequately integrating spatial dimensions and regional development contexts. From a regional development perspective, the distribution of job opportunities, access to education, and labor market dynamics are strongly influenced by regional characteristics. This limitation becomes increasingly relevant in the context of a developing city like Malang, which is experiencing rapid urbanization, a growing youth population, and a transformation of economic structures that may influence the risk of NEET. Rapid urbanization in Indonesian cities has created both opportunities and challenges, where the concentration of economic activities does not always translate into inclusive employment, especially for young people, reflecting structural inequalities in access to education, employment opportunities, and local economic development.

Previous studies, such as Istiqomah et al. (2026) have identified key determinants of youth unemployment, including gender, education, and economic growth, using microdata approaches. However, these studies primarily emphasize individual and socio-economic factors, with limited integration of spatial and regional perspectives. This study aims to fill this gap by integrating individual-level analysis with a regional development perspective, incorporating spatial characteristics such as urban–rural classification and regional economic growth. By doing so, this research provides a more comprehensive understanding of NEET within the context of regional disparities. Therefore, this study contributes to the literature by (1) incorporating a regional development lens into the analysis of NEET, (2) highlighting spatial disparities in youth outcomes, and (3) providing policy-relevant insights for urban planning, particularly in emerging cities such as Malang.

2. Methods

This study employs a quantitative approach using binary logistic regression to examine the probability of youth being classified as Not in Employment, Education, or Training

(NEET). The analysis is based on microdata from the National Labor Force Survey (SAKERNAS), combined with provincial-level economic growth data, serving as a proxy for regional development conditions, across 34 provinces in Indonesia from 2017 to 2023. Indonesian youth aged 16-30 are also targeted as subjects. This age group is considered productive and can be unemployed. However, this type of unemployment is characterized by a lack of initiative to work or develop themselves. They often resign themselves to unemployment, drop out of school, or are held back by disabilities that prevent them from engaging in activities.

The variables used in this study are based on SAKERNAS (National Labor Force Survey) metadata published by the Central Statistics Agency (BPS), facilitating replication for future research. Independent variables include marital status, age group, disability, education, gender, region, economic growth, and the interaction term between marital status and age group.

Table 1. Research Variables.

Variable	Category	
Dependent Variable	Type of NEET Youth	0 = NEET Youth
		1 = Not a NEET Youth
Independent Variable	Marital Status	0 = Married 1 = Unmarried
	Age Group	0 = Adults People (reference category) 1 = Young People
	Disability	0 = No (reference category) 1 = Yes
	Education	0 = High (reference category) 1 = Low
	Gender	0 = Female (reference category) 1 = Male
	Region	0 = Village (reference category) 1 = Urban
	Economic Growth	Contextual variable
	Marital Status*Age Group	Interaction variable

In this study, marital status was classified into two groups: married and unmarried. Age groups were divided into early and late youth. Functional limitations were measured as disability, while education level was classified as the highest or lowest level completed. Gender was categorized as male or female, and residential area as urban or rural. Economic growth was used as a contextual variable, measured by the growth rate of the provincial Gross Regional Product.

Data analysis was conducted using a binary logistic regression, given the dichotomous nature of the dependent variable. This model was used to estimate the probability that a youth is NEET, given observed characteristics. The general formula for the binary logistic regression model used is as follows:

$$n \left(\frac{P_i}{1-P_i} \right) = \beta_0 + \beta_1 \text{Marital Status}_i + \beta_2 \text{Age Group}_i + \beta_3 \text{Disability}_i + \beta_4 \text{Education}_i + \beta_5 \text{Gender}_i + \beta_6 \text{Region}_i + \beta_7 \text{Growth Economic}_i + (\beta_1 \text{Marital Status} * \beta_2 \text{Age Group}) + \varepsilon_i \quad (1)$$

Where :

Pi = Probability of being a NEET youth

1-Pi = Probability of not being a NEET youth

β₀ = Intercept

$\beta_1 - \beta_8$ = the estimated coefficients for each independent variable
 ε_i = Error Term

After the logistic regression model was fit, the next step was to test the overall model's significance using the G-test, which assesses whether the independent variables have a significant simultaneous effect on the dependent variable. Furthermore, individual significance tests were conducted using the Wald test to assess the influence of each independent variable on NEET status, while accounting for characteristics and environmental factors. The estimated regression coefficients were then interpreted as odds ratios, which indicate the likelihood that an observation with the specified characteristics is a success.

To strengthen the regional development perspective, this study incorporates spatial heterogeneity by including regional variables such as place of residence and provincial economic growth. These variables serve as proxies for differences in labor market structure, access to education, and economic opportunities across regions. This approach enables the analysis to capture regional disparities and provides a basis for area-based policy recommendations. Although the analysis is conducted at the national level, the findings are particularly relevant to urbanizing regions such as Malang, where rapid population growth, labor market competition, and structural transformation may intensify the risk of youth exclusion from employment, education, or training. The underlying factor behind using economic growth and region as contextual variables is the disparity in economic performance and spatial characteristics, which influence labor market outcomes from a regional development perspective. Economic growth serves as a proxy for regional economic space in job creation, while the regional variable captures differences in education, job opportunities, and infrastructure. These variables are crucial for examining spatial inequality and understanding how regional development dynamics shape youth's NEET status. Through these factors, the analysis aligns with policy and planning perspectives that emphasize a region-based development approach.

3. Results and Discussion

This section presents and discusses the empirical findings of this study, based on the 2023 National Labor Force Survey and macroeconomic growth data in 34 provinces in Indonesia. Table 2 shows that the distribution of NEET status reveals striking differences in characteristics between NEET and non-NEET youth. In terms of gender, more female youth are in the non-NEET category (58.0%), while male youth dominate the NEET group (67.3%).

Table 2. Characteristics of NEET youth in 34 provinces in Indonesia, 2023.

Classification	Category	NEET Status	
		Not NEET	NEET
		Column N%	Column N%
Gender	Female	58.0%	32.7%
	Male	42.0%	67.3%
Marital Status	Married	29.0%	47.1%
	Un-married	71.0%	52.9%
Age Group	Adults People	39.3%	43.2%
	Young People	60.7%	56.8%
Disability	No	99.2%	96.8%
	Yes	0.8%	3.2%
Education	High	58.9%	61.6%
	Low	41.1%	38.4%
Region	Village	40.8%	45.1%
	Urban	59.2%	54.9%

Source: National Labor Force Survey, 2023

Based on the NEET status distribution table, there are quite striking differences in characteristics between NEET and non-NEET youth. By gender, female youth constitute a larger share of the non-NEET group (58.0%), whereas male youth dominate the NEET group

(67.3%). This descriptive pattern suggests that male youth are more represented among NEET individuals. However, this pattern should be interpreted cautiously, as it does not account for the influence of other variables. In terms of marital status, unmarried youth dominate both groups, but the proportion is higher in the non-NEET group at 71.0% compared to the NEET group, which only makes up 52.9% of NEET youth. Conversely, ever-married youth comprise a larger proportion in the NEET group (47.1%), indicating that changes in marital status can influence youth engagement in productive activities.

Furthermore, by age group, early-stage youth comprise a higher proportion in both the non-NEET group (60.7%) and the NEET group (56.8%). This suggests that the youth phase is a vulnerable transitional period for NEET status. In terms of disability, people with disabilities have a higher proportion in the NEET group (3.2%) compared to non-NEET (0.8%), indicating structural vulnerability due to limited access to education and employment. By education level, highly educated youth predominate in both groups, though the proportion is slightly higher in the NEET group (61.6%). Meanwhile, in terms of residential area, youth living in urban areas are more likely to become NEET.

Logistic regression results and model evaluation

Based on the Chi-square value, the probability value is 0.000, which is less than the test significance level of 0.05. This means that the simultaneous test results reject H0, thus confirming that at least one independent variable influences the dependent variable.

Table 3. Logistic Regression

Variables	B	Sig.	Exp(B)
X1(1)	-0.555	0.000***	0.574
X2(2)	0.557	0.000***	1.746
X3(3)	1.688	0.000***	5.411
X4(4)	-0.475	0.000***	0.622
X5(5)	-0.147	0.000***	0.863
X6(6)	0.874	0.000***	2.397
X7(7)	0.013	0.000***	1.014
X2(2) by X3(3)	-0.453	0.000***	0.636
Constanta	-1.181	0.000***	0.307

Notes: *** Significant at the level 1%

The table of processed data above shows that almost all variables were significant for NEET status, with p-values of 0.000 (<0.05). Individual factors such as marital status, age group, disability, education level, and gender have been shown to influence the likelihood that youth become NEET. Disability was the most influential factor, with persons with disabilities having a more than fivefold increased risk of becoming NEET. Education served as a key protective factor, significantly reducing the risk of NEET, while youth in certain age groups and women were more likely to be NEET.

In addition to individual factors, environmental characteristics also play a significant role in determining NEET status. Youth living in urban areas are more likely to be NEET than youth living in rural areas, reflecting the intense competition for jobs in urban areas (Subastian et al., 2025). Economic growth had a significant but relatively small impact, indicating that growth is not yet fully inclusive of the young workforce. The interaction between marital status and age group suggests that life transition dynamics can reduce the risk of becoming NEET.

The results of this study indicate spatial inequality in the development process. From a regional development perspective, differences in education, job opportunities, and economic structure across regions shape the probability of being NEET. This aligns with the spatial inequality approach, which holds that labor market outcomes remain driven by the geographic distribution of resources and economic activity. Thus, NEET status is determined by the individual's location, not solely by individual characteristics.

Table 4. Classification Table

Observed	Predicted		
	Not NEET	NEET	Percentage Correct
Not NEET	160270	0	100.0
NEET	52649	0	.0
Overall Percentage			75.3

Marital status in relation to NEET youth

Marital status was significantly associated with NEET status (p -value < 0.05), with a coefficient of -0.555 and an odds ratio of 0.574. These results indicate that unmarried youth are more likely to be NEET than married youth. This aligns with research by Hardiani et al. (2023) found that unmarried youth in Indonesia are more likely to be NEET than married youth. On the other hand, several studies emphasize that single youth in developed countries are at a higher risk of becoming NEET due to career and economic instability. Thus, the direction of the relationship between marital status and NEET may be influenced by social norms and access to job opportunities. Furthermore, individual factors such as marital status are common and a family responsibility. A study in Albania, for example, found significant gender differences, with married women with young children being more likely to be NEET due to the burden of domestic responsibilities, while for men, the same conditions can actually increase labor force participation (Sari & Ahmad, 2021).

Unmarried status increases the risk of NEET status, as young people are in an economically unstable transition phase. Therefore, local governments need to develop guidance programs for school-to-work transitions, such as industry-based internships, more specialized vocational training, and incentives for companies to recruit young workers. This is crucial to increasing the productive youth population so that they do not become an economic burden.

Age groups in relation to NEET youth

Age groups indicate that young people are more likely to become NEET. The age-group correlation is significant ($p=0.000 < 0.05$), with a coefficient of 0.557 and an odds ratio of 1.746. This means that the younger a person is, the higher their risk of transitioning from not graduating from school to seeking employment, searching for career direction, and potentially becoming NEET.

Research Kang & Youn (2024) Indicates that the age group significantly influences NEET risk and the gender gap. In the 15-19 and 20-24 age groups, the difference in NEET risk between men and women is not yet significant, as most individuals are still in education and in the early stages of transitioning to the workforce. However, the situation changes drastically in the 25-29 age group. Women are significantly more likely to be NEET than men, with the gap increasing to 5.21 times higher among those aged 30-34.

The high NEET rate among young people is indicative of a systemic failure to bridge the transition from education to the workforce. This condition encourages policy integration in education and employment at the regional level, including strengthening the alignment of the education curriculum with the needs of the region's leading sectors. Within the framework of regional development, young people are an asset for long-term growth. Therefore, failure to integrate young people into the workforce will lead to low productivity and, in turn, create disparities between regions.

Disabilities related to NEET youth

Disability is the most significant factor influencing NEET status. The data analysis found that disability was significant ($p < 0.05$), with a coefficient of 1.688 and an odds ratio of 5.411. This reflects the low accessibility and inclusion of people with disabilities in education and employment, making them the most economically and socially vulnerable group. These data analysis findings align with research conducted by Citra (2022), which found that in 2020,

2.62%, or approximately 64,469 people with disabilities, were NEET, and they were 4.435 times more likely to become NEET.

The high risk of NEET among people with disabilities indicates obstacles to providing equal access to education and employment. The government needs to promote policies such as implementing inclusive job training programs, providing subsidies to companies that employ people with disabilities, and improving infrastructure to enhance accessibility. In terms of regional development, the inclusion of people with disabilities not only promotes social participation but also stimulates the economy by expanding the workforce and boosting regional productivity.

From a regional development perspective, the high risk of NEET among people with disabilities indicates disparities in the provision of adequate infrastructure and access to public services across regions. Regions with inadequate fiscal capacity and service quality tend to have limited access to inclusive education and training. This suggests that the vulnerability of people with disabilities is not solely individual, but also influenced by the spatial context and regional development policies.

Impact of education on the status of NEET youth

Education showed a significant effect on NEET status ($p=0.000$, $p<0.05$), with a coefficient of -0.475 and an odds ratio of 0.622. The table shows that the higher a person's education, from high school to college or university, the greater the risk that their NEET status decreases by 0.622. This is in line with research Zanga & Olivares-Tirado (2025), which found that youth with low levels of education, or those with only a junior high school education or less, are at higher risk of successfully entering the job market, leading to an unstable transition to a productive life. Those with lower secondary education also often face obstacles, such as limited skills and competencies and a mismatch between their achievements and industry needs, which increases the likelihood of being classified as NEET. This supports Human Capital Theory, which states that the better the quality of education and skills, the greater the chance of being absorbed into the job market.

These results indicate that a key indicator of regional development is the level of investment in education. Not only does access to education need to be improved, but so does its quality and relevance to regional workforce needs. The government needs to support educational development that aligns with the region's superior potential, for example, tourism, agro-industry, or local manufacturing. Improving the quality of education directly contributes to increased labor productivity and regional competitiveness, and to minimizing inter-regional inequality.

The impact of gender on NEET youth

The data analysis results above indicate that gender significantly influences the occurrence of NEET youth in Indonesia, with a significance coefficient of -0.147 and an odds ratio of 0.863. This indicates that certain groups, specifically males, have a lower risk of becoming NEET than females. This aligns with research by Faizah et al. (2025), which found that the NEET phenomenon in Indonesia is particularly pronounced, especially in the two largest provinces, West Java and Central Java. This is due to the deeply rooted patriarchal culture that has long been a tradition and a norm that they must uphold. A particularly prominent aspect of this phenomenon is the difficulty women face in securing employment and formal education, despite having equal access to these opportunities. This is evident from Figure 1, which shows that West Java and Central Java have the highest numbers of NEET youth among Indonesia's provinces.

These results indicate that gender disparity is a structural problem in the Indonesian workplace. Therefore, regional development policies need to integrate gender perspectives, including providing childcare facilities, flexible working hours, and skills training for women. Socialization regarding the importance of women's participation in the formal economy is also necessary to prevent it from becoming a social and cultural barrier. Women's participation not only improves household welfare but also contributes to overall regional economic growth.

Regional impact on the status of NEET youth

Regional status had a significant effect on NEET status ($p=0.000$, <0.05), with a coefficient of 0.874 and an odds ratio of 2.397. This suggests that youth living in urban areas are more likely to be NEET than those living in rural areas. This finding is supported by Erdogan et al. (2021), who noted that while job opportunities are more abundant in urban areas, competition and skill requirements are much higher. Therefore, youth lacking industry-relevant skills tend to be left behind and become NEETs. Many young people migrate to cities with high hopes of finding work, but limited social networks, high living costs, and complex job market demands make it difficult for them to be quickly absorbed. Youth living in areas with better access to education and employment tend to have a lower risk of NEET. Conversely, regions with limited employment opportunities and a high concentration of the informal sector are more likely to see youth enter the NEET category due to limited formal employment and high economic pressures.

Urbanization without labor market readiness can increase the vulnerability of NEETs. Regional development strategies must be more balanced across both urban and rural areas. The government needs to increase employment opportunities by developing local economies, including MSMEs, creative industries, and resource-based businesses. This is expected to reduce the surge in urban migration. This approach is crucial for minimizing social inequality and creating equitable growth.

These findings indicate that urbanization can exacerbate spatial inequality, but it does not always translate into inclusiveness in the labor market. Within a regional development framework, economic activity in urban areas is often accompanied by stricter labor market segmentation, leaving less-skilled workers marginalized. This emphasizes that regional differences are not merely geographical but also represent structural inequalities in development.

The impact of economic growth on NEET youth

Economic growth significantly impacts NEET status, with a coefficient of 0.013 and an odds ratio of 1.014. However, its impact is minimal; this may be because economic growth does not always create job opportunities for young people, especially when it is capital-intensive or excludes low-skilled workers. Regression results show a positive coefficient for economic growth, meaning that as economic growth increases, the likelihood of becoming NEET also increases. This means that economic growth has not reduced the NEET rate or absorbed the young workforce (Dluhopolskyi et al., 2024).

The low impact of economic growth indicates non-inclusive, jobless growth, necessitating a reorientation of regional development strategies to pursue more inclusive, higher-quality growth. The government needs to improve labor-intensive sectors, strengthen the connection between economic growth and employment, and strengthen the entrepreneurial ecosystem for youth. Non-inclusive economic growth tends to widen social disparities, thus hindering inter-regional convergence.

NEET status based on individual characteristics

The results of the binary logistic regression indicate that individual characteristics significantly influence the likelihood that youth will become NEET. Male youth and those in the younger age group (15–24 years old) are at higher risk due to the unstable transition from education to work. Conversely, married youth are more likely to be encouraged to work, thereby lowering the risk of becoming NEET. Education is an important protective factor, with higher levels of education leading to a lower likelihood of becoming NEET. This aligns with the Human Capital Theory, which emphasizes that investment in education and skills increases productivity and employment opportunities. Meanwhile, people with disabilities are at the highest risk of becoming NEET due to limited access to education and training, which hinders their human capital accumulation.

Younger youth (15–24 years old) are at higher risk of becoming NEET, providing empirical evidence that this transition phase is vulnerable to career uncertainty. Marital status and its interaction with age also illustrate this transition. Unmarried youth are still in the process of determining their educational and career paths, while married youth are encouraged to begin working immediately to meet household needs. This is reinforced by

research by Blokker et al. (2023), which found that the success of the transition is strongly influenced by individual readiness and the support of the surrounding socio-economic environment.

NEET status based on environmental characteristics

Perspectives on environmental characteristics have also been shown to influence NEET status. The residence variable shows a significant relationship: youth living in urban areas are more likely to become NEET than those living in rural areas. According to Sri et al. (2025) Indonesia experienced a surge in the number of NEET youth, reaching 7.07% in 2020 due to the pandemic and the demographic bonus, adding to the complexity of employment issues for Indonesian youth, the quality of education, and the lack of equitable access to training. Furthermore, economic growth also has a significant, albeit minimal, impact on the likelihood of being NEET. This condition indicates that economic growth is not fully inclusive of young people. This growth is driven by capital-intensive sectors rather than labor-intensive sectors that provide job opportunities for beginners. Thus, environmental factors indicate that high NEET status is not determined solely by personal characteristics but is also influenced by the economic and spatial contexts of the areas where young people live. Without integrated economic, educational, and employment policies, regional economic growth will be unable to optimally absorb young workers, thus widening regional disparities.

Urban Planning and Regional Development Implications

From a regional development perspective, the findings of this study indicate that the NEET phenomenon is not solely driven by individual characteristics but is also strongly shaped by spatial inequalities and urban labor market dynamics. This aligns with Rahmani & Groot, (2023) who show that the higher likelihood of NEET status among youth in urban areas suggests that economic concentration does not automatically translate into inclusive employment opportunities, particularly for young people with limited skills and work experience. This condition is highly relevant to rapidly growing urban areas such as Malang, which experience increasing urbanization, population inflows, and labor market competition. As a city with a strong education sector and a growing service-based economy, Malang attracts many young people. However, the mismatch between educational outcomes and labor market demands may contribute to the persistence of NEET youth in the city (Paramitasari et al., 2024).

In terms of urban planning and regional policy, these findings highlight the need for place-based interventions. Local governments, including Malang City, should strengthen school-to-work transition programs by integrating vocational education with local industry needs, expanding internship and apprenticeship schemes, and improving job-matching services. In addition, urban policies should focus on inclusive labor market access, particularly for vulnerable groups such as women, low-educated youth, and people with disabilities. Furthermore, spatially targeted policies are essential to reduce disparities between urban and surrounding areas (Rodríguez-García & Donati, 2021). Strengthening local economic development through MSMEs, creative industries, and youth entrepreneurship programs can help absorb young labor more effectively. Therefore, addressing the NEET issue requires not only national-level strategies but also localized planning approaches that are responsive to the specific socioeconomic dynamics of cities such as Malang.

Overall, the results of this study indicate that the NEET phenomenon arises from the interaction between individual factors and the spatial structure of development. An approach focused solely on individual characteristics is insufficient to explain variation in NEET risk, as regional inequality in access plays a significant role. Therefore, this analysis emphasizes the importance of integrating micro-level approaches with regional development perspectives to understand youth labor market dynamics.

4. Conclusion

This study concludes that the Not in Education, Employment, or Training (NEET) phenomenon in Indonesia is a multidimensional problem shaped by both individual and environmental factors. The results of a binary logistic regression analysis indicate that

marital status, age group, disability, education level, gender, region of residence, economic growth, and the interaction between marital status and age group significantly influence the probability of youth aged 16–30 becoming NEET. Empirically, vulnerable groups such as people with disabilities, young people, women, individuals with low education, and those living in urban areas are at higher risk of becoming NEET. Conversely, education has been shown to be a key protective factor, while economic growth has not been fully inclusive in absorbing the young workforce. From a regional development perspective, these findings indicate that spatial disparities and urban labor market dynamics play a significant role in shaping NEET outcomes. Urban areas, including cities such as Malang, tend to exhibit higher risks due to increasing labor market competition and mismatches between education and employment opportunities.

Therefore, more targeted and actionable policies are required. First, local governments need to strengthen school-to-work transition programs by aligning education and vocational training with regional economic sectors. Second, place-based employment policies should be developed to expand job opportunities for youth, particularly by supporting MSMEs, creative industries, and local entrepreneurship. Third, inclusive labor market policies are necessary to support vulnerable groups, especially women and persons with disabilities, through targeted training programs and improved access to employment. Finally, regional planning strategies should emphasize balanced development between urban and surrounding areas to reduce spatial inequality and improve youth labor market integration.

This study is limited by its reliance on secondary data and a quantitative approach that does not fully capture local dynamics. Future research is recommended to incorporate regional-level data and mixed methods to provide a more comprehensive understanding of NEET in specific urban contexts.

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Conflict Of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Author Contributions

All authors contributed significantly to this research. Conceptualization, methodology, data collection, and analysis were carried out collaboratively. The manuscript was written and reviewed by all authors, and all authors have approved the final version of the manuscript.

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