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Social Class and the Transition to Adulthood: Not in Education, Employment, or Training (NEET) Youth in Indonesia

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Abstract

This study takes a comprehensive approach to the issue of Not in Education, Employment, or Training (NEET), delving into the often overlooked role of social class disparities. By using a multilevel mixed-effects logistic model and data from the 2022 National Social Economic Survey (SUSENAS), it provides a robust exploration of the complex socioeconomic factors that shape the transition to adulthood among youth. This study contributes to understanding social stratification and its impact on NEET youth. The main finding underscores the protective role of social class against youth being NEET, revealing that adolescents from higher social class households are less likely to disengage from study or work compared to those from lower social classes. The analysis uncovers determinants of NEET youth, including, among others, being female, married, having higher education, and having a female-headed household. Meanwhile, protective factors of NEET youth include, among others, age, disability, residing in a household whose head is working, and residing in urban areas. Comparing estimation results across social classes reveals that individuals from the low social class have a significantly higher propensity to be NEET than those from the high social class.

Keywords: Indonesia, Multilevel Mixed-Effects Logistic Model, NEET Youth, Social Class

1. Introduction

The smooth transition from education to the workforce is not just pivotal for individual success, but also holds the key to economic vitality (OECD, 2023). This phase, which measures how well educational systems prepare students for real-world challenges, underscores the potential of the youth population. The Not in Education, Employment, or Training (NEET) youth rate, covering individuals aged 15 to 24 who are not participating in education, employment, or training, provides a comprehensive view beyond youth unemployment. It considers challenges such as early school dropout, limited job prospects, barriers to education or training access, and social exclusion (Elder, 2015). The UN designated NEET youth as Indicator 8.6.1 of the Sustainable Development Goals

(UNDESA, 2015), emphasizing its critical role in promoting equal opportunities and addressing vulnerabilities among youth in sustainable development initiatives.

The International Labor Organization (ILO, 2024) projects the global NEET youth rate in 2024 to be 21.7%, with Southeast Asia at 17.5%. However, a glaring gender disparity persists, with young women facing significantly higher NEET rates than men. In Southeast Asia, for instance, 23.1% of young women are NEET compared to 13.9% of young men. In Indonesia, the Central Bureau of Statistics (BPS, 2023) reported a NEET rate of 25.8% among youth aged 15-24 in 2023, with women (35.7%) having more than twice the NEET rate of men (16.4%).

Given Indonesia's significantly higher NEET youth rate compared to neighboring Southeast Asian countries, it is imperative to gain a comprehensive understanding of the factors influencing this measure. By leveraging comprehensive nationwide data, we can better pinpoint why Indonesian youth tend towards NEET status, accounting for demographic and socioeconomic differences at the district level. This understanding will not only be instrumental in the development of effective strategies to ensure youth remain actively involved in education and employment, but also attract our curiosity about the unique challenges faced by Indonesian youth.

Several systematic reviews, scoping reviews, and meta-analyses have explored the factors influencing NEET youth in the past three years. Rahmani and Groot (2023), in their scoping review, identified that educational attainment, work experience, skills, physical and mental health, marital status, parental income, education, job status, and socioeconomic factors such as poverty and social inequalities are critical determinants of NEET status among youth. Meanwhile, a systematic review and meta-analysis conducted by Rahmani et al. (2024) highlighted that NEET youth face increased risks of suicide, criminal behavior, and unemployment, with higher levels of education acting as a protective factor. A scoping review by Petrescu et al. (2024) emphasized that individual-level factors and contextual variables, including policies, influence the likelihood of youth becoming NEET. Interestingly, the study also revealed a need for more consensus regarding a unified definition of NEET youth. A meta-analysis of longitudinal data by Gariépy et al. (2022) suggested that mental health problems, along with combined measures of mental health and substance use, are predictors of becoming NEET later in life. A study by van Vugt et al. (2024) found that NEET status is driven by low literacy levels, with low-literate young people being more likely to remain NEET for extended periods. The study also found that countries' institutional characteristics influence NEET youth risks and that social-democratic welfare states reduce overall NEET youth likelihood, although low-literate individuals benefit less.

The literature on determinants of NEET often overlooks the role of social class. However, a pivotal study by Dicks et al. (2020) stands out, asserting that the risk of becoming NEET is closely tied to variables central to status attainment models: skills, education, and social class. This study's findings are crucial, revealing that a higher social class background can significantly reduce the risk of youth becoming NEET. Moreover, it underscores that the influence of social class is mediated by youth education, thereby emphasizing the impact of social class on NEET outcomes through educational attainment. Furthermore, the study highlights that the effect of social class is not static, but rather, it is moderated by youth education and personality traits, indicating that the relationship between social class and the likelihood of becoming NEET is dynamic and varies depending on levels of education and individual personality characteristics.

We strongly argue that incorporating social class into the study of NEET youth is not just important, but it's crucial. Social class profoundly impacts access to education and employment opportunities, molds social networks, and dictates the availability of resources and support systems for young people. Therefore, this study will not just emphasize, but it will underline social class as a pivotal determinant of NEET among the youth population, highlighting the urgency of addressing this issue.

This study takes a comprehensive approach to analyze the factors influencing NEET youth in Indonesia using nationally representative data. Specifically, the study aims to investigate how social class disparities affect the determinants of NEET status among youth, offering deep insights into the complex socioeconomic factors shaping their transition to adulthood. Through a two-pronged approach, we will explore how social class influences NEET youth propensity. First, we can uncover overarching factors contributing to NEET status across diverse

socioeconomic backgrounds by analyzing determinant variables across all research observations. This provides a comprehensive understanding of NEET youth propensity. Second, by categorizing observations into four social classes, we conduct a nuanced analysis that reveals specific patterns and disparities within social classes regarding NEET outcomes, offering crucial insights into the socioeconomic factors influencing youth disengagement from education and employment.

This study addresses a significant research gap by examining how social class influences NEET youth. The findings can inform strategies to reduce youth unemployment and improve educational attainment, which is critical for promoting inclusive economic growth. Furthermore, within the Indonesian context, this study represents a pioneering effort to systematically explore the status of NEET youth across different social classes using nationally representative data, providing a solid foundation for future research and policy development.

2. Materials and Methods

2.1 Methodology

This study utilizes a multilevel mixed-effects logistic model to tackle nesting and the categorical aspect of dependent variables. Acknowledging the hierarchical structure of the data, where individuals (level 1) are nested within districts (level 2), substantiates the choice to employ such a model. Additionally, the model accommodates the binary nature of the dependent variable. Incorporating random intercepts for each district addresses unobserved heterogeneity and discrepancies in socioeconomic conditions across districts. This modeling strategy not only facilitates the inclusion of individual and district-level variables but also enables a comprehensive analysis, delving deep into the impact of social class on the likelihood of youth being NEET (Rabe-Hesketh & Skrondal, 2022).

Our empirical model comprises a latent variable, a variable that is not directly observed but is inferred from other variables, representing the underlying probability of youth not participating in employment, education, or training. This model examines the relationship between the latent variable and various factors, including individual characteristics, household attributes, and district-level contextual variables:

$$y_{ij}^* = x \mathbf{1}_{ij} \beta \mathbf{1} + x \mathbf{2}_j \beta \mathbf{2} + z_{ij} u_j + \epsilon_{ij}$$

The connection between the observed binary y_{ij} and the latent y_{ij}^* is established using a straightforward measurement equation:

$$y_{ij} = \begin{cases} 0 \ if \ y_{ij}^* > 0 \\ 1 \ if \ y_{ij}^* \le 0 \end{cases}$$

where y_{ij}^* is the unobserved probability of youth becoming NEET, $x 1_{ij}$ represents the individual and household characteristics of individual i living in district j; $x 2_j$ represents the district contextual variables for district j; z_{ij} denotes the covariates corresponding to the random effects; since this model follows a random intercept model, z_{ij} is simply the scalar 1; u_j represents the random effects; and ϵ_{ij} represents the errors, distributed as logistic with mean 0 and variance $\pi 2/3$ and are independent of u_i .

2.2 Data

The 2022 National Social Economic Survey (SUSENAS), a key data source for this article, is conducted annually by Indonesia's Central Statistics Agency (BPS). It provides a representative view at the district level, covering all 514 districts in 2022. This study specifically delves into the data of 178 463 respondents aged 15-24 who are neither heads of households nor spouses of heads of households. The decision to exclude 15 249 youth respondents who are heads of households or spouses of heads of households from the analysis was made to avoid potential biases, as these individuals do not reflect the typical youth population. Focusing on this more homogeneous group

of youth allows researchers to accurately compare NEET rates across various demographics and socioeconomic backgrounds, ensuring the reliability of our findings.

In this study, NEET youth refers to individuals aged 15-24 who, during the week prior to the survey, fell into one of the following categories: (a) engaged in unpaid household responsibilities, (b) involved in personal activities such as sports, courses, picnics, social engagements (e.g., local organizations and community services), or religious worship, or (c) not engaged in any activities, defined as those who did not work, attend school, take care of the household, or participate in any activities other than personal ones during the past week. This definition excludes individuals employed or involved in entrepreneurship but temporarily not working.

Our study employs a rigorous methodology, using household income (per capita expenditures (PCE)) as the primary determinant of social class. While information on employment status and work sector is available for the head of household and his/her spouse, it may not comprehensively capture the intricacies of social class determination. Nonetheless, the study utilizes the available data to draw significant conclusions regarding the relationship between household income and life opportunities. This methodological approach mirrors the works of Zhang & Chen (2023). The lower class refers to households with the lowest 25% of per capita expenditures (PCE) or those in the first quartile. The lower-middle class encompasses households with per capita expenditures in the second quartile (25th to 50th percentile). The upper-middle class comprises households in the third quartile (50th to 75th percentile), while the higher class comprises households in the fourth quartile (top 25%).

Using the two definitions above, Figure 1 shows that the calculated NEET rate among individuals aged 15-24 is 21.3%. Indonesia's official NEET youth figure for 2022 stands at 23.2% (BPS, 2023). Our NEET calculation results indicate a slightly lower rate, approximately 1.9% less. However, incorporating youth who are heads of households or spouses of heads of households in the calculation produces a NEET youth rate of 22.8%, which is only about 0.5% lower than the official figure. When stratified by social class, Figure 1 shows that the NEET youth rate decreases as social class increases. This finding has significant implications, as it reveals a gap in NEET rates between low-class and high-class families. Youth from low-class families have the highest NEET rate at 25.9%, while those from high-class families have the lowest NEET rate at 16.2%, reflecting a gap of 9.7%. In addition, Table 1 complements this by displaying the mean and standard deviation of all variables used in this study for all observations and by social class.

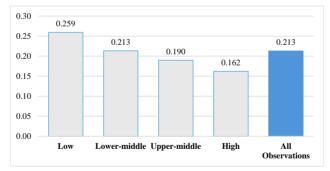


Figure 1: NEET Youth Rate by Social Class, 2022 Source: Author's calculation based on SUSENAS 2022 data

Variable	All Obs		Low		Lower-middle		Upper-middle		High	
v ai labic	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Individual/Household	(N=178 463)		(N=55 825)		(N=48 845)		(N=42 444)		(N=31 349)	
NEET	0.213	0.409	0.259	0.438	0.213	0.410	0.190	0.392	0.162	0.368
Female	0.461	0.498	0.470	0.499	0.458	0.498	0.454	0.498	0.459	0.498
Married	0.061	0.239	0.078	0.268	0.062	0.242	0.051	0.219	0.041	0.198
Age	18.87	2.77	18.69	2.75	18.81	2.76	18.95	2.78	19.15	2.81
Education: Up to Primary	0.071	0.256	0.104	0.305	0.072	0.259	0.055	0.228	0.032	0.175
Education: Junior Secondary	0.219	0.414	0.262	0.440	0.226	0.418	0.196	0.397	0.164	0.370
Education: Senior Secondary	0.532	0.499	0.514	0.500	0.550	0.497	0.553	0.497	0.506	0.500
Education: Tertiary	0.178	0.383	0.120	0.325	0.151	0.358	0.196	0.397	0.299	0.458
Person with Disability	0.007	0.083	0.008	0.090	0.007	0.082	0.007	0.083	0.006	0.076
Head Female	0.136	0.343	0.122	0.327	0.131	0.337	0.145	0.353	0.155	0.362
Head Working	0.898	0.303	0.906	0.292	0.906	0.292	0.894	0.307	0.875	0.330
Urban	0.426	0.495	0.311	0.463	0.407	0.491	0.483	0.500	0.586	0.492
Log (Per Capita Expenditures)	13.80	0.60	13.20	0.30	13.67	0.21	14.07	0.20	14.70	0.42
Member aged 0-4	0.185	0.388	0.283	0.450	0.184	0.388	0.130	0.337	0.085	0.278
Member aged 60+	0.201	0.401	0.229	0.420	0.200	0.400	0.187	0.390	0.172	0.378
Live in Own House	0.890	0.313	0.890	0.313	0.888	0.316	0.883	0.321	0.901	0.298
Receive Social Assistance	0.307	0.461	0.427	0.495	0.346	0.476	0.241	0.427	0.119	0.324
District Contextual	(N=5	14)								
Poverty Rate	11.68	7.27								

Table 1: Mean and Standard Deviation of Data

Source: Author's calculation based on SUSENAS 2022 data; Poverty Rate figures are from BPS' Tabel Dinamis (https://www.bps.go.id/id/query-builder)

3. Results and Discussions

Table 2 presents the multilevel mixed-effect logistic model estimation results for NEET youth propensity. The table contains six models: the first two, [1] and [2], utilize all observations, while Models [3] to [6] are specific to each social class. Model [1] focuses on three binary social class variables—lower-middle, upper-middle, and high—using the low class as the base case, which is the primary interest of this study. To provide nuance, Model [2] substitutes the social class variables with log(PCE). Both models yield comparable results regarding magnitude and significance for each variable, indicating that social class and log(PCE) produce similar estimates. However, Model [1] uncovers an important finding: higher social class is inversely related to the likelihood of youth becoming NEET, highlighting a significant socioeconomic trend. This finding is particularly relevant in the context of our study, and it underscores the importance of our research in understanding and addressing NEET youth propensity.

Table 2: Multilevel Mixed-effects Logistic Estimates of Propensity of NEET Youth

	All Obs: Social Class [1]		All Obs: log(PCE) [2]		[3]		Lower-Middle [4]		Upper-Middle [5]		High [6]		
Social Class													
Social Class: Lower Middle	0.791	(0.013) ***											
Social Class: Upper Middle	0.697	(0.013) ***											
Social Class: High	0.641	(0.013) (0.014) ***											
Log (Per Capita Expenditures)	0.041	(0.014)	0.730	(0.010) ***	0.626	(0.030) ***	0.858	(0.075) *	0.780	(0.070) ***	0.906	(0.041) **	
Individual Characteristics													
Female	1.566	(0.021) ***	1.566	(0.021) ***	1.649	(0.039) ***	1.586	(0.042) ***	1.499	(0.043) ***	1.418	(0.049) ***	
Married	0.117	(0.010) ***	0.117	(0.010) ***	0.107	(0.013) ***	0.105	(0.018) ***	0.139	(0.026) ***	0.159	(0.037) ***	
Female * Married	35.436	(3.029) ***	35.283	(3.015) ***	37,740	(4.875) ***	42.615	(7.458) ***	31.186	(6.130) ***	26.697	(6.426) ***	
Age 16	3.181	(0.127) ***	3.183	(0.127) ***	3.243	(0.195) ***	3.093	(0.240) ***	3.002	(0.281) ***	3.672	(0.462) ***	
Age 17	4.268	(0.166) ***	4.264	(0.166) ***	4.216	(0.251) ***	4.434	(0.333) ***	3.938	(0.358) ***	4.986	(0.612) ***	
Age 18	9.399	(0.350) ***	9.374	(0.349) ***	8.430	(0.484) ***	9.781	(0.702) ***	10.462	(0.897) ***	11.560	(1.356) ***	
Age 19	14.088	(0.519) ***	14.052	(0.518) ***	13.053	(0.743) ***	15.109	(1.075) ***	15.627	(1.330) ***	15.928	(1.846) ***	
Age 20	14.762	(0.555) ***	14.716	(0.553) ***	14.902	(0.871) ***	16.096	(1.169) ***	14.572	(1.261) ***	15.785	(1.855) ***	
Age 21	14.310	(0.546) ***	14.258	(0.544) ***	13.807	(0.825) ***	14.605	(1.078) ***	15.823	(1.383) ***	16.010	(1.90) ***	
Age 22	14.668	(0.567) ***	14.613	(0.565) ***	13.296	(0.811) ***	13.938	(1.045) ***	15.599	(1.381) ***	21.737	(2.565) ***	
Age 23	14.237	(0.574) ***	14.187	(0.572) ***	12.139	(0.786) ***	15.140	(1.182) ***	14.898	(1.358) ***	20.072	(2.424) ***	
Age 24	11.665	(0.478) ***	11.626	(0.372) (0.477) ***	10.308	(0.683) ***	11.571	(0.916) ***	11.820	(1.099) ***	17.206	(2.091) ***	
Education: Junior Secondary	0.620	(0.016) ***	0.621	(0.016) ***	0.587	(0.003) ***	0.679	(0.034) ***	0.657	(0.039) ***	0.670	(0.058) ***	
Education: Senior Secondary	0.386	(0.009) ***	0.387	(0.009) ***	0.327	(0.012) ***	0.417	(0.019) ***	0.504	(0.037) ***	0.476		
Education: Tertiary	0.119	(0.003) ***	0.121	(0.009) (0.009) ***	0.075	(0.012)	0.116	(0.007) ***	0.159	(0.027)	0.184	(0.016) ***	
Person with Disability	4.267	(0.281) ***	4.262	(0.280) ***	4.222	(0.482) ***	4.925	(0.645) ***	3.747	(0.498) ***	4.873	(
	All Obs: Social Class		All Obs: log(PCE)		Low		Lower-Middle		Upper-Middle		High		
		[1]		[2]		[3]		[4]		[5]		[6]	
Household Characteristics													
Head is Female	0.857	(0.017) ***	0.858	(0.017) ***	0.855	(0.030) ***	0.882	(0.034) ***	0.850	(0.035) ***	0.837	(0.040) ***	
Head is Working	1.115	(0.025) ***	1.116	(0.025) ***	1.183	(0.047) ***	1.152	(0.052) ***	1.121	(0.053) **	0.975	(0.052)	
Urban		(. ,		· /	0.991	(0.031) *	1.069	(0.035) **	1.024	(0.043)	
Urpan	1.052	(0.018) ***	1.059	(0.018) ***	1.068	(0.031) ***				((0.061)	
	1.052 0.931	(0.018) *** (0.017) ***	1.059 0.928	(0.018) *** (0.017) ***	1.068 0.881	(0.031) *** (0.024) ***		(0.033)	0.952	(0.042)	0.983		
Member aged 0-4	0.931	(0.017) ***	0.928	(0.017) ***	0.881	(0.024) ***	0.946	(0.033)	0.952	(0.042) (0.035)	0.983	(0.046)	
Member aged 0-4 Member aged 60+	0.931 0.982	(0.017) *** (0.016)	0.928 0.980	(0.017) *** (0.016)	0.881 0.929	(0.024) *** (0.025) ***	0.946 0.993	(0.031)	0.993	(0.035)	1.041	(0.046) (0.072) ***	
Member aged 0-4 Member aged 60+ Live in Own House	0.931	(0.017) ***	0.928	(0.017) ***	0.881	(0.024) ***	0.946	. ,		. ,	1.041 1.206	(0.046) (0.072) *** (0.038) ***	
Member aged 0-4 Member aged 60+	0.931 0.982 1.070	(0.017) *** (0.016) (0.024) ***	0.928 0.980 1.076	(0.017) *** (0.016) (0.024) ***	0.881 0.929 1.035	(0.024) *** (0.025) *** (0.040)	0.946 0.993 1.039	(0.031) (0.044)	0.993 1.096	(0.035) (0.050) **	1.041 1.206	(0.072) ***	
Member aged 0-4 Member aged 60+ Live in Own House Receive Social Assistance District Contextual	0.931 0.982 1.070	(0.017) *** (0.016) (0.024) ***	0.928 0.980 1.076	(0.017) *** (0.016) (0.024) ***	0.881 0.929 1.035	(0.024) *** (0.025) *** (0.040)	0.946 0.993 1.039	(0.031) (0.044)	0.993 1.096	(0.035) (0.050) **	1.041 1.206	(0.072) ***	
Member aged 0-4 Member aged 60+ Live in Own House Receive Social Assistance	0.931 0.982 1.070 0.809	(0.017) *** (0.016) (0.024) *** (0.012) ***	0.928 0.980 1.076 0.803	(0.017) *** (0.016) (0.024) *** (0.012) ***	0.881 0.929 1.035 0.829 0.984	(0.024) *** (0.025) *** (0.040) (0.020) ***	0.946 0.993 1.039 0.806	(0.031) (0.044) (0.022) ***	0.993 1.096 0.769	(0.035) (0.050) ** (0.026) ***	1.041 1.206 0.686	(0.072) *** (0.038) ***	
Member aged 0-4 Member aged 60+ Live in Own House Receive Social Assistance District Contextual Poverty Level	0.931 0.982 1.070 0.809 0.995	(0.017) *** (0.016) (0.024) *** (0.012) *** (0.003) **	0.928 0.980 1.076 0.803 0.992	(0.017) *** (0.016) (0.024) *** (0.012) *** (0.003) ***	0.881 0.929 1.035 0.829 0.984 47.850	(0.024) *** (0.025) *** (0.040) (0.020) *** (0.003) ***	0.946 0.993 1.039 0.806 0.993	(0.031) (0.044) (0.022) *** (0.003) **	0.993 1.096 0.769 1.001	(0.035) (0.050) ** (0.026) *** (0.003)	1.041 1.206 0.686 1.005	(0.072) *** (0.038) *** (0.004)	
Member aged 0-4 Member aged 60+ Live in Own House Receive Social Assistance District Contextual Poverty Level Constant Var: District (constant) LR-test (p-value)	0.931 0.982 1.070 0.809 0.995 0.075 0.163 0.000	(0.017) *** (0.016) (0.024) *** (0.012) *** (0.003) ** (0.005) ***	0.928 0.980 1.076 0.803 0.992 4.732 0.165 0.000	(0.017) *** (0.016) (0.024) *** (0.012) *** (0.003) *** (0.902) ***	0.881 0.929 1.035 0.829 0.984 47.850 0.189 0.000	(0.024) *** (0.025) *** (0.040) (0.020) *** (0.003) *** (30.575) ***	0.946 0.993 1.039 0.806 0.993 0.449 0.199 0.000	(0.031) (0.044) (0.022) *** (0.003) ** (0.546) *	0.993 1.096 0.769 1.001 1.255 0.155 0.000	(0.035) (0.050) ** (0.026) *** (0.003) (1.591)	1.041 1.206 0.686 1.005 0.130 0.130 0.000	(0.072) *** (0.038) *** (0.004) (0.089) ***	
Member aged 0-4 Member aged 60+ Live in Own House Receive Social Assistance District Contextual Poverty Level Constant Var: District (constant)	0.931 0.982 1.070 0.809 0.995 0.075 0.163	(0.017) *** (0.016) (0.024) *** (0.012) *** (0.003) ** (0.005) ***	0.928 0.980 1.076 0.803 0.992 4.732 0.165	(0.017) *** (0.016) (0.024) *** (0.012) *** (0.003) *** (0.902) ***	0.881 0.929 1.035 0.829 0.984 47.850 0.189	(0.024) *** (0.025) *** (0.040) (0.020) *** (0.003) *** (30.575) ***	0.946 0.993 1.039 0.806 0.993 0.449 0.199	(0.031) (0.044) (0.022) *** (0.003) ** (0.546) *	0.993 1.096 0.769 1.001 1.255 0.155	(0.035) (0.050) ** (0.026) *** (0.003) (1.591)	1.041 1.206 0.686 1.005 0.130 0.130	(0.072) *** (0.038) *** (0.004) (0.089) ***	

Source: Author's calculation

Notes: Standard errors are in parentheses. *** statistically significant at the 1% level, ** 5%, * 10%

Model [1]'s intraclass correlation coefficient (ICC) is 0.047, indicating that differences between districts account for approximately 4.7% of the total variance in the propensity of being NEET youth, with the primary source of variability in life satisfaction at the individual level (95.3%). Furthermore, the likelihood ratio (LR) test of Model [1], which compares the multilevel mixed-effects logistic model to the conventional (single-level) logistic model, produced a p-value of 0.000. This p-value, which is less than the conventional threshold of 0.05, indicates significant differences in estimates between the two models. These findings suggest that the multilevel mixed-effects logistic model provides more accurate estimation results than the standard logistic model.

Unless otherwise specified, the discussion will primarily focus on the estimates from Model [1]. However, we will also delve into the comparisons based on social class (Models [3]—[6]), a crucial aspect that adds depth and relevance to our research. We will particularly highlight the comparisons between high and low social classes for a comprehensive understanding.

3.1 Social Class

Social class is a crucial determinant in the school-to-work transition and, consequently, in avoiding the NEET status, as demonstrated by the study conducted by Dicks et al. (2020). Blustein et al. (2002) highlight that individuals from higher social classes benefit from greater career adaptability, better access to resources, and higher levels of self-concept crystallization, giving them a significant advantage in transitioning smoothly into the workforce. Conversely, those from lower-class backgrounds often face considerable barriers that hinder their progression to employment, education, or training. Complementing these findings, Staff & Mortimer (2008) reveal

that higher social class youth tend to pursue less intensive employment during high school and invest in postsecondary education, while lower social class youth often engage in early, intensive work experiences that do not support long-term educational and wage achievements. These disparities underline the critical role of social class in shaping educational and career paths, with lower social class youth facing increased risks of becoming NEET due to the compounded challenges in their school-to-work transitions.

The research findings on the relationship between social class and NEET status shed light on the crucial role of financial resources in this dynamic. The estimation results demonstrate a progressive pattern, indicating that youth from lower-middle, upper-middle, and high social classes have respective decreases in the likelihood of becoming NEET by 20.9%, 30.3%, and 35.9%, respectively, compared to those from the low social class. This pattern is primarily attributed to higher social class youth often having enhanced access to financial resources, which not only facilitates their education but also reduces the need for early employment. The findings also underscore the importance of stable and higher household incomes, which provide a safety net and alleviate economic pressures that might otherwise lead youth to discontinue education or training.

Our findings, particularly in Model [2], underscore the significant role of economic conditions in reducing NEET status. They reveal that a 1-unit increase in log(PCE) is linked to a decrease in NEET youth probability by approximately 27.0%. This implies that higher social class or increased PCE corresponds to a decreased propensity for NEET youth status. For youths in the low social class, a 1-unit increase in log(PCE) results in a 37.4% reduction in the odds of becoming NEET. In contrast, the same increase for youths in the high social class leads to only a 9.4% reduction. This substantial difference emphasizes the critical need for improving economic conditions, as indicated by higher per capita expenditures, which has a significantly greater positive impact on reducing NEET status for youths in the low social class.

The use of social class bivariate variables and log(PCE) both effectively highlight the influence of economic conditions on NEET status. These measures are supplementary, providing additional insights that enhance the understanding of the primary variable. They demonstrate that higher financial resources and social class reduce the likelihood of youth becoming NEET. Including log(PCE) in each social class model allows for a more nuanced quantification of this impact.

3.2 Gender and Marital Status

Female youth are 56.6% more likely (or 1.57 times higher odds) to become NEET than male youth, highlighting a significant gender disparity in NEET status. This finding is supported by ample international evidence, including Odoardi et al. (2023). Research from Turkey contextualizes this phenomenon, suggesting that being a young female NEET is not solely a personal choice but is influenced by structural factors within education and employment policies. This underscores the persistence of traditional gender roles assigning women primary responsibilities for domestic work (Lüküslü & Çelik, 2022).

When we compare estimates between low and high social classes, we find that the association is slightly stronger among individuals from the low social class. Among individuals in this class, females have 1.65 times higher odds of becoming NEET than males. Conversely, females from the high social class have 1.45 times higher odds. This difference indicates that while gender significantly influences NEET status across all social classes, socioeconomic factors linked to low social class may exacerbate this relationship, leading to a more pronounced impact on NEET outcomes among females in that demographic.

Marriage exerts a protective effect, reducing the likelihood of youth becoming NEET by 88.3% compared to unmarried youth. The result parallels the study conducted by Quintano et al. (2018) and World Bank (2019). This finding underscores the potential of marriage to offer stability, emotional support, and shared resources, thereby reducing youth's risk of NEET status. However, it becomes evident that the distribution of these benefits is not uniform but varies across different demographic groups. Marital status is crucial in influencing the likelihood of youth becoming NEET across low and high social classes. Specifically, married youth from the low social class experience a staggering 89.3% lower odds of NEET status compared to their unmarried counterparts. In contrast,

married youth from the high social class exhibit slightly less improvement, with approximately 84.1% lower odds of NEET status than their unmarried counterparts.

Female married youth have an astounding 35.4 times higher odds of becoming NEET than male unmarried youth. This statistic underscores a significant interaction effect between gender and marital status on NEET likelihood. In a study examining the determinants of NEET youth in Indonesia, Pattinasarany (2019) found that marriage is linked to a 9.3% higher likelihood of becoming NEET. When analyzing the data by gender, the study revealed a stark contrast: among males in the sample, being married is associated with a 17.1% lower likelihood of becoming NEET than unmarried men. Conversely, being married is associated with a 17.7% higher probability among females in the sample. A study by Utomo (2012) highlighted that in Indonesia, while many males smoothly transition from school to work, many females remain inactive and are excluded from the labor market. Furthermore, after marriage, many women face constraints in freely choosing their careers due to deeply ingrained societal expectations. These expectations predominantly emphasize their roles as wives and mothers, which can create substantial hurdles for women aspiring to pursue careers without external interference.

The disparity in NEET odds between married females across social classes is stark. In the low social class, married females are about 37.7 times more likely to become NEET than unmarried males. In contrast, in the high social class, married females are about 26.7 times more likely to become NEET than unmarried males. This disparity indicates that the influence of being a married female in the low social class on NEET status is considerably higher than that of unmarried males, more than it is in the high social class.

3.3 Age

Age covariates, a crucial aspect in our model, are represented as nine binary variables, each denoting the respondent's specific age. The estimation results reveal a compelling trend in which individuals aged 16 are 3.2 times more likely to be NEET than those aged 15. This progressive increase in the point estimates from age 16 to 20 underscores the cumulative effect of age on the probability of youth becoming NEET. At age 20, youth transition from late adolescence to early adulthood, a pivotal period where they assume increased responsibilities and make crucial decisions about education, employment, and independence. The significant jump in the estimate between ages 18 and 19 is particularly noteworthy. This could be attributed to various factors, such as individuals completing senior secondary education but not continuing to tertiary education or engaging in employment or the challenges of transitioning from a structured school environment to the more independent world of work or higher education. The findings parallel the study of Gaffari & Handayani (2019) and Pattinasarany (2019).

Comparing age point estimates across social classes shows that the likelihood of being NEET increases more among youths from high social class households. This result is counterintuitive, as higher social class is associated with better access to education and employment opportunities. However, one potential explanation is that high social class youths have the financial flexibility to take breaks from formal education or training to explore other interests, travel, or prepare for college entrance exams, leading to temporary NEET status. The fact that the odds of being NEET are highest at age 20 for the low social class and at age 22 for the high social class underscores the complex interplay of socioeconomic and developmental factors that affect youth differently across these age groups and social classes. In particular, youth from low social class households might face economic pressure to start working early to contribute to household income, often taking up low-skilled jobs.

3.4 Education Attainment

The analytical model demonstrates that higher educational attainment is associated with a lower probability of youth becoming NEET. Individuals with junior secondary, senior secondary, and tertiary education are 38.0%, 61.4%, and 88.1%, respectively, less likely to be NEET than those with only primary education. The increasing magnitude of these coefficients with higher education levels proves the significant impact of advanced education in reducing the likelihood of being NEET. Absor & Utomo (2017), in their analysis of the determinants of successful school-to-work transitions for young adults in the capital area of Indonesia concluded that education has a strong positive impact on this process. They found that education plays a key role in mitigating the adverse

effects of traditional cultural values and promoting successful transitions from school to work. The findings align with most studies on the determinants of NEET youth, but it's important to acknowledge exceptions to this trend. For instance, in Russia (Zudina, 2022), higher education does not universally protect against NEET status.

Individuals from the low social class who have completed junior secondary education are 41.3% less likely to be NEET than those with only up to primary education. In comparison, those from the high social class are 32.9% less likely. While junior secondary education is beneficial in reducing NEET likelihood in both social classes, the reduction is slightly greater in the low than in the high social class. Such disparity highlights the potential of completing junior secondary school to bring more pronounced educational benefits to individuals from low social class. Similar social class comparisons hold for senior secondary and tertiary education youth.

3.5 Youth with Disability

This study defines the disability covariate as individuals who experience at least one of eight types of difficulties or impairments that moderately or severely impact their daily activities: vision, hearing, walking or climbing stairs, using or moving hands/fingers, remembering or concentrating, behavior or emotional issues, speaking or understanding/communicating, and self-care. Estimation results indicate that youth with disabilities are 4.27 times more likely to be NEET compared to their non-disabled peers. The finding parallels Cabral's (2018) and Luthra's (2019) studies. A study by Siregar et al. (2021) shows that individuals with disabilities in Indonesia often encounter significant barriers to economic and societal participation. Such discriminatory attitudes and biases against individuals with disabilities can further limit their opportunities in both educational and employment sectors.

Adolescents with disabilities are 4.22 times more likely to be NEET in the low social class group and 4.87 times more likely in the high social class group compared to their non-disabled peers. These high odds ratios indicate that disability significantly increases NEET risk across all social classes. The slightly higher and unexpected odds ratio in the high social class is a poignant reminder of the potential impact of societal and familial pressures. These pressures, coupled with greater stigma and high expectations for success, may amplify the challenges faced by these individuals, making it harder for them to achieve educational and employment goals.

3.6 Household Head Characteristics

Two key indicators of household head characteristics are gender and employment status during the survey. When the head of the household is female, the likelihood of youth becoming NEET decreases by around 14.3% compared to when the head is male. Female heads may prioritize resources differently, potentially emphasizing education and skill development for their children. This focus could result in lower NEET rates as young people are better equipped for the job market or further education. The findings align with the studies conducted by Navarrete & Sánchez (2016) and Pattinasarany (2019). Comparison across social classes suggests that youth from female-headed households are 14.5% less likely to become NEET in the low social class and 16.3% in the high social class. The slightly greater reduction in the high social class hints at a more pronounced effect in this group, which could inform potential policy implications for youth skill development.

About the second indicator, we found that the probability of being NEET increases by approximately 11.5% when the household head is employed, compared to when they are unemployed. This probability rises even higher, by approximately 18.3%, for youths in low social class. However, the working status of the household head among youth in high social class does not significantly affect the odds of being NEET. These findings suggest that a working head does not provide sufficient support or resources to mitigate the risk to youth within his/her household among low-class households, whereas the working status of the household head does not significantly affect the odds of being NEET among high-class households.

3.7 Type of Residence

Youth residing in urban areas are 5.2% more likely to be NEET than their rural counterparts. With their heightened competition for employment opportunities, urban settings may contribute to this increase in NEET probability. The opposite is true for the case of Poland (Smoter, 2022).

For youths in the low social class, urban living increases the odds of being NEET by approximately 6.8% compared to rural living. This disparity suggests that urban environments pose additional challenges or lack adequate support systems, such as employment opportunities, educational resources, or training programs, which could reduce the risk of being NEET. However, for youths in the high social class, urban living does not significantly affect the odds of being NEET, indicating the potential of urban environments to provide better access to resources and opportunities that prevent them from becoming NEET, regardless of whether they live in urban or rural areas.

3.8 Household Composition

Our research on household member composition has yielded significant findings. The model incorporates two variables: the presence of household members aged 0-4 (under-5) and those aged 60+ (elderly). The estimation results reveal a counterintuitive pattern: the presence of a household member aged 0-4 is associated with a 6.9% decrease in the probability of youth becoming NEET. This unexpected outcome suggests that families with young children prioritize stability and financial security, emphasizing education and employment opportunities for older siblings. In contrast, the presence of an elderly member in the household does not significantly affect the likelihood of youth being NEET. This lack of statistical significance raises interesting questions, such as the role of confounding variables, which warrants further exploration in the analytical model.

Our findings have profound implications for understanding the dynamics of youth becoming NEET in different social class households. In low social class households, the presence of under-5 children and the elderly reduces the odds of youth becoming NEET by 11.9% and 7.1%, respectively, compared to households without. However, in high social-class households, this effect is not significant. This suggests that young children and the elderly can significantly influence youth's educational and employment outcomes in lower social classes but not in higher social classes.

3.9 Household Assets and Social Assistance

Living in a household-owned home is associated with a 7.0% increase in the probability of youth becoming NEET. This finding is significant as it challenges the common perception that owning a house reflects economic wellbeing and provides stability and security, which should ensure youth educational or employment opportunities. The positive coefficient suggests that other factors linked to homeownership may counterbalance the potential benefits for youth engagement in education and employment.

The impact of living in one's own house on NEET status varies significantly between social classes. It shows no effect on NEET status in the low social class but contributes to higher NEET rates among youth from higher socioeconomic backgrounds. This difference underscores the importance of understanding the varying economic contexts and priorities related to household assets, which significantly influence outcomes for youth.

The impact of receiving social assistance on reducing the odds of youth becoming NEET shows intriguing and unexpected results across different social classes. In the low social class, social assistance is associated with a 17.1% lower odds of youth becoming NEET, whereas in the high social class, this reduction is a striking 31.4%. This disparity suggests a more substantial impact of social assistance in the high social class, highlighting the need for further investigation into these findings.

3.10 District Contextual

The estimation results indicate that for each 1% increase in the district-level poverty rate, the odds of a youth becoming NEET decrease by 0.5%. This finding is significant as it challenges conventional wisdom and suggests that districts with higher poverty rates may not necessarily lead to higher NEET rates among youth. This could be

explained by the possibility that districts with higher poverty rates are associated with a more active informal economy, where youth are more likely to engage in informal work or vocational training, reducing the likelihood of being NEET. Importantly, poorer districts often boast stronger community support systems, crucial in keeping youth engaged in education or employment. This underscores the importance of understanding and leveraging these community support systems to address youth NEET rates. Amendola (2022) analyzes macro-level determinants of the NEET rate across 40 countries, finding a positive correlation between poverty and the NEET rate at the national level.

Comparison across social class samples suggests that higher poverty rates are associated with a slight decrease in youth NEET odds in the low social class. However, poverty rates in the high social class show no significant association with NEET odds. This stark contrast suggests that district-level poverty rates have a minimal impact on NEET likelihood in higher social classes despite a small statistically significant effect in the lower social class. It is clear that other factors, yet to be fully understood, play a more significant role in determining NEET status among youth from higher socioeconomic backgrounds.

4. Conclusions

4.1 Summary of Findings

The central finding of this study underscores the protective role of social class against youth being NEET. Adolescents from higher social class households are less likely to disengage from study or work than those from lower social classes. Additionally, a higher PCE, a measure of economic well-being, correlates with a decreased probability of NEET status among youth.

Moreover, the analysis uncovers a multifaceted web of factors that influence the likelihood of youth becoming NEET. It is not a simple binary of 'NEET' or 'not NEET', but a nuanced interplay of various circumstances, including individual characteristics, household dynamics, and socioeconomic status. Factors that increase the probability of NEET status include being female, being a married female, having a disability, having an employed household head, living in urban areas, or owning a home. Conversely, factors associated with a lower likelihood of NEET status include being married (for adolescents), having higher education, coming from female-headed households, living with young children under five years old, and receiving social assistance. Age also plays a role, with a positive correlation with NEET probability up to age 20, after which this effect diminishes as youth age. Finally, district-level poverty, the only contextual variable in the study, indicates a reduction in the likelihood of being NEET.

Comparing estimation results across social classes generally reveals a wider disparity in NEET propensity for individuals from the low social class compared to those from the high social class. This stark disparity, evident in variables such as gender, marital status, the interaction between being married and female, and educational attainment, underscores the gravity of the situation. On the other hand, unexpected findings are apparent in variables such as age, disability status, households headed by females, and households receiving social assistance, underscoring the need for further investigation.

4.2 Policy Implications

Policymakers should consider several actions based on this study's findings. They should invest in education and skill development for lower social class youth, which will not only ensure equitable access to quality education and vocational training but also lead to enhanced educational attainment and employability. This can be achieved by providing targeted scholarships, mentorship programs, career counseling, and promoting employment opportunities. Additionally, they should develop specific education, training, and employment opportunities for youth with disabilities, which will contribute to their overall empowerment and inclusion in society.

Due to the considerable impact of NEET status on females, policymakers should prioritize empowering women in employment. Promoting flexible work arrangements and family-friendly policies, such as remote work and

parental leave, can effectively assist women in balancing career and family responsibilities. Moreover, policymakers should implement programs that provide affordable childcare, educational grants, and training, specifically targeting those from lower social classes to empower married female youth. Collaborating with community and religious leaders to launch campaigns aimed at changing societal expectations that limit women's career opportunities and promoting the benefits of delaying marriage is also crucial (Nabila et al., 2022).

4.3 Significance of the Research

This study not only fills a critical research gap by exploring how social class influences youth to become NEET, but also provides actionable insights. It illuminates how socioeconomic status impacts NEET outcomes, guiding targeted interventions and informing policymaking for more effective and equitable solutions. By understanding these class-based dynamics, we can better address inequality and support disadvantaged groups, making a tangible difference in the lives of NEET youth.

Prior research on the determinants of NEET youth in Indonesia has primarily relied on data from the National Labor Force Survey (SAKERNAS), which collects household-level employment data (Anggraini et al., 2020; Naraswati & Jatmiko, 2022; Sari & Ahmad, 2021). Other studies have used data from the Indonesia Family Life Survey (Gaffari & Handayani, 2019) and the Socio-Cultural and Education module of SUSENAS (Pattinasarany, 2019). In contrast, this study utilizes SUSENAS data, providing a new foundation for similar research and opening avenues to explore additional factors that could influence NEET youth status. The inclusion of factors such as access to health services, food security, and utilization of various social protection and welfare programs could significantly enhance our understanding of NEET youth status, a crucial aspect of youth development and social welfare in Indonesia.

This study employs a robust multilevel regression approach, assuming that youth are nested within the districts where they reside. This methodological choice underscores our focus to a subnational spatial perspective on the NEET phenomenon, specifically examining how the district of residence affects the likelihood of individuals being classified as NEET. As of 2022, Indonesia is administratively divided into 34 provinces and 514 districts, with most basic public services, including education and employment, managed at the district level. Naraswati & Jatmiko's (2021) study investigates the determinants of NEET youth using multilevel regression, assuming respondents are nested at the provincial level. In contrast, our study adopts a more granular perspective by focusing on macro and socioeconomic conditions at the district level. Several international studies on the propensity of NEET youth also examine spatial aspects at the subnational level, including Cinquegrana et al. (2023) in Italy and Yang (2020) in China.

4.4 Study Limitations and Future Extension

While limited by its reliance on a single-year longitudinal dataset, this study is comprehensive in its approach. Future work can leverage the annual availability of SUSENAS data from the past five years (2019-2023) to thoroughly study evolving determinants and trends. This timeframe is particularly significant as it allows for a comprehensive investigation of the impact of the COVID-19 pandemic on the likelihood of youth being NEET. The years 2019-2020, 2021-2022, and 2023 serve as the pre-pandemic, pandemic, and post-pandemic periods, respectively, providing a comprehensive understanding of how the pandemic has influenced youth transitions, thereby aiding in the development of resilient and inclusive recovery strategies (Norvell Gustavsson & Jonsson, 2024).

This study's definition of social class relies heavily on household PCE, which serves as a proxy for economic status. Adopting a broader definition incorporating multiple dimensions, such as the Goldthorpe Social Class Scheme (Erikson & Goldthorpe, 1992), can enhance future work. This schema considers occupational class, educational qualifications, and employment relations as critical determinants of social class. Understanding these multidimensional aspects helps identify effective interventions and policies to reduce NEET rates across different social strata.

The SUSENAS data, unfortunately, does not provide sufficient information to distinguish between inactive NEET and unemployed NEET individuals. This distinction is a crucial aspect of our research, as it has distinct implications and necessitates tailored strategies to address their specific challenges (Maguire, 2015). The urgency of this research lies in understanding and addressing the unique circumstances of each group, which can significantly contribute to effectively supporting and empowering NEET individuals, and ultimately, to the betterment of our society.

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