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Youth Not in Employment, Education or Training (NEET): Evidence from National Labor Force Survey 2018

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Abstract: This study aims to examine and analyze the socio-demographic, socio-economic, and regional characteristics that influence an individual on being Not in Employment, Education, or Training (NEET). The data is from the February 2018 National Labor Force Survey (Sakernas) and analysed using binary logistic regression with descriptive and inferential approach. The descriptive results show that socio-demographic characteristics such as female, married, and having disability tend to become NEET. Socio-economic characteristics such as graduating from high school and living with an employed household head also tend to become NEET. Furthermore, regional characteristics such as living in rural area and living in area outside Java Island tend to become an NEET. Meanwhile, the inferential results show that female, married, having disability, not graduating from school, living with an unemployed household head, living in rural area, and living in Java Island have significant effect on the chances of becoming NEET.

Keywords: Young Population, NEET, Labor, Unemployment, Binary logistic regression

Introduction

The young population is a human resource that has better health potential, education, and access to knowledge compared to the older generation (Furstenberg, 2010). The concept of young population according to the United Nations (UN) is those aged 15-24 years. Another concept promoted by the OECD related to the young population is those aged 15-29 years, so it can also be said that the concept of the young population is different in each country. The Central Bureau of Statistics (BPS) conducted population projections in 2010, in which the number of young people in Indonesia was estimated to increase in 2035, reaching 70 million people (S. Adioetomo et al., 2014).

This young population will then lead to a demographic bonus where the number of productive-age people is greater than those who are not, so that labor productivity must increase (S. Adioetomo et al., 2014). The productivity of the young population in the labor market must be achieved optimally so as not to cause problems, one of which is youth unemployment.

Table 1. Percentage of the Younger Population by Type of Activity in the Last Week, processed from Sakernas 2017.

Activity	Region		Gender		Age Categories		
	Urban	Rural	Men	Women	16-18	19-24	25-30
Work	50,19	53,18	63,10	39,47	19,95	54,43	69,12
Unemployment	9,50	6,91	10,09	6,65	8,03	12,34	4,61
School	22,70	16,57	20,36	19,80	60,07	13,35	0,73
Domestic Work	15,25	20,81	2,86	32,86	8,62	17,05	24,11
Others	2,36	2,53	3,60	1,23	3,32	2,83	1,44
Total	100	100	100	100	100	100	100

Source: Data processed from Sakernas 2017

Table 1 above shows the productivity of the youth population by type of activity in the past week. The numbers explain that a higher percentage of male youth were looking for work compared to females. Meanwhile, for household care activities, the percentage of female youth is much higher than male youth. This indicates that male youth tend to work or look for work to fulfill their family's needs, while female youth tend to take care of the household. The above conditions indicate that the productivity of the young population has not been maximized.

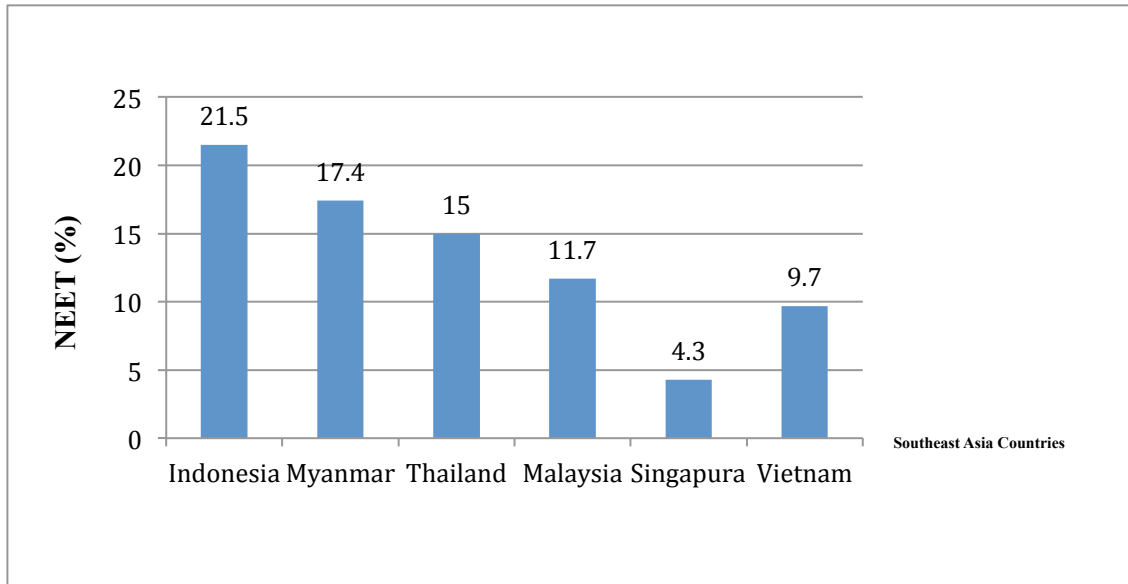
The productivity of the young population that has not been maximized will certainly lead to new problems, namely youth unemployment (Fox et al., 2016) . The occurrence of youth unemployment begins with the problem of the lack of experience possessed by the young population, which causes a mismatch between the level of work desired, and the appropriate job based on the experience possessed (Furlong, 2006; Noh & Lee, 2017). Furthermore, the youth unemployment rate is higher than the adult unemployment rate (Reinecke & Grimshaw, 2015).

Youth unemployment can also occur because of various problems experienced by the young population. Furlong (2006) and Noh & Lee (2017a) revealed that youth unemployment occurs starting with the problem of lack of experience, which makes it difficult for young people to find suitable jobs. Meanwhile, the condition of youth unemployment in Indonesia occurs because of the large number of young people who do not have access to productive work (ILO, 2014).

One of the measures used to measure the unproductive young population is those who have left school, are not working, not continuing school or training, commonly referred to as Young Not in Education, Employment, or Training (NEET). ILO (2014) states that NEET is a relatively new measure but plays an important role as an indicator to see the potential to address the vulnerability of the youth population, issues of unemployment, school dropout, and youth disappointment in the labor market.

NEET is a measure that is increasingly used by analysts to look at the efforts of the youth population to make the transition from education to employment but remain out of the education or employment cycle, thus indicating the extent of idleness among the youth population (S. M. Adioetomo et al., 2014). The NEET rate can also be used to project the amount of potential loss experienced by the government of human resources in the future because young people who become NEET will remain NEET in the next six months (Raffe, 2003).

Figure 1. Percentage of NEET Youth Population (15-24 years old) of Southeast Asian Countries



Source: Data processed from ILO, 2018

The figure above shows the NEET rate compared across five countries consisting of non-student unemployment and non-student non-labor force population. A comparison of the NEET rate among these countries shows that Indonesia has a relatively high rate. It also shows that the opportunity of the demographic bonus in Indonesia has not been utilized (S. M. Adioetomo et al., 2014). In the long run, NEET can lead to various social disadvantages, such as dissatisfaction, insecurity, unsatisfactory future employment, and even affect mental and physical health (European Foundation, 2012).

These negative effects then affect not only the individual themselves but also their social environment, such as increased public expenditure related to the issue of unemployment, and therefore must be addressed as a social issue (Chen, 2011). NEET, which has become a social issue, is of course influenced by many factors. Diliansa (2016a) in her research on the young population of NEE (Not in Employment and Education) argues that socio-demographic, regional, economic, and soft skill characteristics are factors that influence the chances of the young population becoming NEE. Poverty, not having a work plan, and experiencing dissatisfaction during schooling are also factors for individuals to become NEETs (Noh & Lee, 2017a).

Based on this phenomenon, this research intends to analyze the characteristics of young people who are NEET. What kind of characteristics are likely to make young people fall

into the NEET group? This information can be useful to see what factors make young people become NEET. Is the NEET phenomenon a voluntary condition of the individual or is it forced due to the demographic, socio-economic, and regional conditions of the individual. The results of the study are expected to be able to provide input to policy makers in dealing with the phenomenon of young NEET population in Indonesia.

This study uses data from the National Labor Force Survey (Sakernas) which is designed to collect employment information. The researcher is interested in conducting this research because there are still few NEET studies conducted in Indonesia. As conducted by Dilia (2016b), socio-demographic, regional, economic, and soft skill characteristics are factors that influence the chances of young people in Indonesia becoming NEETs. Based on that previous study, the authors intend to add variables such as disability and marital status (Wickremeratne & Dunusinghe, 2018b). The descriptive analysis will further discuss the activeness of the NEET youth population in seeking employment, accepting job offers, and whether they still want a job. The reasons for the inactivity of the young population in looking for work will be further elaborated.

Furthermore, we will also discuss the existence of NEETs not in the labor force and the labor force to determine the activeness of the young NEET population in finding a job. Non-labor force NEETs are those who are not working, studying, or attending training but are not actively looking for work. Labor force NEETs are those who are not working, studying, or attending training, but are still actively looking for work.

Literature Review

The Concept of NEET

The concept of NEET in youth issues varies greatly depending on the organization or country. OECD (2015a) defines NEET as individuals who are not in employment, education, or training, where having few individuals who are neither in employment, nor in education or training is a good sign of a transition from school to work. Understanding Children's Work (2013) program formulates NEETs as young people who are not engaged in education, employment, or training which is used as a measure of marginalized and segregated youth in developed countries. According to Understanding Children's Work (2013), NEETs include both unemployed youth and those outside the labor force who are not in school. This definition expands the concepts of unemployment and labor force participation to analyze youth labor market disadvantage, including young people who have given up looking for work or are unwilling to join the labor market.

Meanwhile ILO (2022) defines a young person to be classified as NEET, they must satisfy two conditions: (i) not employed (unemployed or inactive) and (ii) did not receive any education or training in the four weeks preceding a survey. Eurostat Labour Force Statistic (2014) considers NEETs to be an interesting issue for policymakers as most of them are perceived to have difficulties in finding employment.

European Foundation (2012) states that the NEET rate is a single indicator that shows a very heterogeneous population, consisting of several groups of vulnerable and non-vulnerable young people with different characteristics, experiences, and needs. The five groups included in NEET are:

1. Conventional unemployment, the subgroup with the largest number, is divided into short-term unemployment and long-term unemployment. This group is a vulnerable group that unknowingly suffers from a lack of available jobs.
2. The unavailable, which includes young people with caring responsibilities and young people who are sick or disabled. This group has a mix of vulnerable and non-vulnerable groups: young people with disabilities who need support to enter the labor market or education, young mothers who cannot afford childcare, and young mothers with high household incomes who voluntarily leave the labor market to look after their children.
3. Disengaged, young people who are not seeking employment or education and are not restricted from doing things by obligation or other incapacities include discouraged workers and other young people who pursue dangerous and asocial lifestyles. This group has been unsuccessful in entering the job market and has given up trying, leaving them vulnerable to a variety of complex situations and needs.
4. Voluntary job seekers are young people who actively seek employment or training but are only willing to accept opportunities appropriate to their skills and status. This group includes the less vulnerable and those from privileged backgrounds who have consciously decided to remain outside the labor market and education system.
5. Voluntary NEETs, young people who are traveling and they engage constructively in other activities such as art, music, and self-study.

The definition of NEET that will be used in this study refers to the definition of Understanding Children's Work (2013), OECD (2015a), and ILO (2022), namely the population aged 15-29 years who are not working and not participating in education, namely youth who are looking for work/unemployed and not the labor force who are not in school. This approach to the 15-29-year-old population is also based on the Labor Law, which defines the youth population as the 16-29-year-old population.

Hypotheses Development

According to the BPS (2018) in the labor indicator, unemployment is a population that is not working but is looking for work or is preparing a new business or a population that is not looking for work because they have been accepted to work but have not yet started working. Sukirno (2019) states that unemployment is a situation where a person who is included in the labor force wants to get a job but has not gotten one. A person who is not working but not actively looking for work is not classified as unemployed. The main factor that causes unemployment is a lack of aggregate spending.

In the context of education, people decide whether to go to school or not by considering how much value can be obtained if they go to school and how much it costs them to pursue their education (Priyono, 2015). The responsibility of individuals to educate themselves, get a job, and transform themselves into productive members of society is one of the issues in Scultz's theory (Tirtosudarmo, 2008). Supposedly, if a person fails to make himself a productive member of society, it is his fault and responsibility as an individual, for example, because he is lazy or unintelligent and not because of the bias of the system. Meanwhile, most people who are unable to find work are due to factors beyond their control such as socio-economic status, ethnicity, and gender, rather than their unwillingness or inability.

Training program aimed at enhancing the transition from school-to-work for students or youth who have completed school (Findeisen et al., 2022; Ovat et al., 2010). Participation in training shows that productive-age youth who are no longer in school want to enrich their skills. The purpose of participating in training is also to match skills with labor market needs (Findeisen et al., 2022).

H1. Demographic condition has a significant effect on becoming NEET.

In studies on NEET, gender is associated with the NEET status of young people (Genda, 2007; European Foundation, 2012). In almost all OECD countries, the average female NEET rate is 4.4 percent higher than males (OECD, 2015b). The next demographic variable is marital status, which is said by Wickremeratne & Dunusinghe (2018a) that status of married and divorced individuals also widowed in Sri Lanka, makes individuals have limitations in work and prioritize the role of taking care of the household, especially Muslim women. The cultural norms of Islam in Sri Lanka restrict Muslim women from participating in education, work, and training.

Disability is a demographic variable that also has an influence on a person becoming NEET. S. M. Adioetomo et al. (2014) states that people with disabilities have the potential to fall into the NEET group. This is because people with disabilities experience a decrease in motivation to look for work.

H2. Social-economy condition has a significant effect on becoming NEET.

Various literatures prove that education level affects a person's NEET status (Genda, 2007; Bılan, 2014). It is reinforced by the findings of Dorsett & Lucchino (2014) who state that low education levels are strongly correlated with the transition problem from school to work. Low educational attainment is the dominant factor that influences a person to enter the NEET group. Young people who left school when they were 16 years old or older, boys who were not taught to read by their parents when they were five years old, and lack of parental attention to their daughter's education when they were 10 years old, can predict whether someone is NEET or not (Bynner & Parsons, 2002).

Then Rusyda (2014) research stated that the mother's education with the length of schooling approach has a significant effect on the activities of sons and daughters, which shows that the higher the mother's education, the probability of boys and girls attending school is also higher. The opposite is seen in the working possibility and taking care of the household. Meanwhile, the European Foundation (2012) also found that parental education level is related to someone's chances of being NEET.

OECD (2015b) defines adult cohabitation as young people living in households where at least one household member is 30 or older. Individuals counted as adults could be parents, grandparents, older siblings, partners or housemates. In its paper, the OECD (2015b) revealed that those who are NEETs are more likely to live with an adult aged 30 years or older than those who are not NEETs.

The proportion of NEETs living with adults is 20-30 percent higher than employed. In other words, in OECD countries, those who are NEET appear to be the main obstacle to achieving free or unattached youth. In line with that, the media and some researchers in

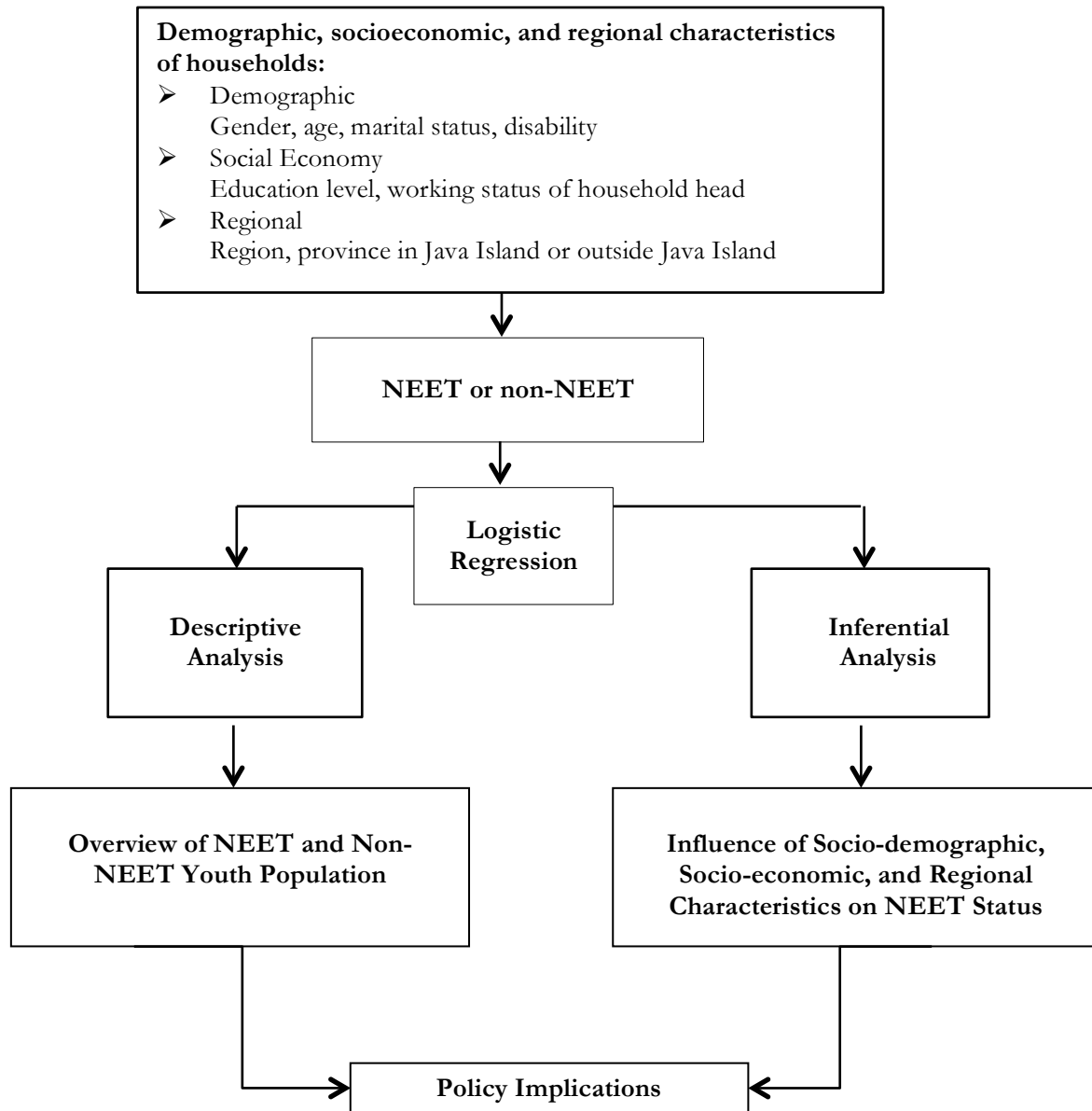
Japan raised the emergence of NEET due to excessive indulgence by parents so that NEET actors feel no need to work so they depend on their parents or act as parasite singles (Kurniawan, 2009).

H3. Regional variable has a significant effect on becoming NEET.

Young people living in urban areas are more likely to be NEETs than those living in rural areas (Haryanti, 2015). This is similar to a study by Understanding Children's Work (2013), which states that young people in rural areas are less likely to be NEET than young people in urban areas. Likewise, in Nigeria, the high unemployment rate in urban areas is due to the migration of young people from rural to urban areas in the hope of getting better job opportunities, but this young population lacks the skills to compete in the urban labor market (Kakwagh, 2019).

The research to be conducted by the author has some differences from research conducted in Indonesia on NEET. Variables such as disability and marital status will be a separate review in the descriptive analysis related to their influence on the young population who become NEET. Studies related to NEETs not in the labor force and labor force will also be discussed in the descriptive analysis of the research, as well as Genda (2007a) research which describes the condition of the young population in Japan NEETs who are in the labor force are greater than those who are not in the labor force, this shows that the young population in Japan is active in the labor market.

Figure 2. *Conceptual Framework*



Source: (S. M. Adioetomo et al., 2014; Diliiana, 2016b; Genda, 2007b; Noh & Lee, 2017b; Wickremeratne & Dunusinghe, 2018b)

Methods

This study uses a quantitative approach to determine the influence of an individual's socio-demographic, socio-economic, and regional characteristics on his or her chances of becoming a NEET youth in 2018. The analysis technique then used to find the relationship between the dependent variable and the independent variable is binary logistic regression. Descriptive analysis is used to describe the characteristics of individuals who are likely to be a factor in the occurrence of the NEET youth population. Meanwhile, inferential analysis is used to determine the influence of socio-demographic, socio-economic, and regional characteristics on the NEET status of the young population in Indonesia. The population aged 15-29 years who became the subject of the study was selected from Sakernas 2018 after the cleaning the data collected a total of 37893 individuals.

There are two kinds of variables used in this study, namely the dependent variable and the independent variable. The dependent variable of NEET status consists of 2 categories, namely NEET ($Y=0$) and not NEET ($Y=1$). A variable value of $Y = 1$ indicates the presence of a characteristic and $Y = 0$ indicates the absence of a characteristic. Meanwhile, the independent variables that will be used are the conditions of the individual who is the object of research, including gender, age, marital status, level of education completed, disability, employment status of the head of household, province, and region of residence. The description of data required in the preparation of this research is cross section data described in the following table:

Table 2. Research Variables

Variable	Description	Notes
Y	Status of activities conducted in the past week and month	0: Not NEET 1: NEET
AGE	Age of respondents seen from the last birthday	15-29 years
GENDER	Gender differences	0: Men 1: Women
MARRIAGE STATUS	Respondents' marital status, which can be categorized as unmarried, married, divorced, and widowed	0: Unmarried 1: Married 2: Divorced 3: Widowed
EDUCATION LEVEL	Last education completed by the respondent	0: Not graduating school 1: Elementary 2: Junior high school 2 : Senior high school 3 : Diploma 4 : Bachelor 5 : Master/Doctor
DISABILITY	Respondent has a disability or not	0: No 1: Yes
HOUSEHOLD HEAD	Employment status of household head	0: Not Working 1: Working
PROVINCE	Province where the household lives	0: Non-Java Island 1: Java Islan
REGIONAL	Area where the household lives	0 : Urban 1 : Rural

The logistic regression model influenced by p independent variables can be expressed as follows:

$$\ln\left(\frac{\pi(x_i)}{1 - \pi(x_i)}\right) = \beta_0 + \beta_1x_1 + \dots + \beta_px_p + u_i$$

The general model of the status of the young population in this study is as follows:

$$\begin{aligned} \ln\left(\frac{p}{1 - p}\right) = & \beta_0 + \beta_1\text{women} + \beta_2\text{age} + \beta_3\text{married} + \beta_4\text{divorced} + \beta_5\text{widowed} \\ & + \beta_6\text{elementaryschool} + \beta_7\text{junior} + \beta_8\text{senior} + \beta_9\text{diploma} \\ & + \beta_{10}\text{bachelor} + \beta_{11}\text{master/doctor} + \beta_{12}\text{disability} \\ & + \beta_{13}\text{workinghouseholdhead} + \beta_{14}\text{java} + \beta_{15}\text{rural} + \varepsilon \end{aligned}$$

Source: (S. M. Adioetomo et al., 2014; Diliiana, 2016b; Genda, 2007b; Noh & Lee, 2017b; Wickremeratne & Dunusinghe, 2018b)

Findings

Table 3. Descriptive Analysis

Dependent Variable		Sample Distribution (%)
NEET Status (Y)	Y= 1, NEET	21,87
	Y= 0, non-NEET	78,13
Independent Variables		Dependent Variables NEET (%)
Age (X₁)	Mean = 22 years SD = 3,8 years	
Gender (X₂)	X ₂ = 1, Women	70,6
	X ₂ = 0, Men	29,4
Marriage Status (X₃)	X ₃ = 1, Married	50,6
	X ₃ = 2, Divorced	2
	X ₃ = 3, Widow/Widower	0,2
	X ₃ = 0, Unmarried	47,2
Education (X₄)	X ₄ = 1, Elementary	18,3
	X ₄ = 2, Junior	23,9
	X ₄ = 3, Senior	39,7
	X ₄ = 4, Diploma	2,6
	X ₄ = 5, Bachelor	7,1
	X ₄ = 6, Master/Doctor	0,1
	X ₄ = 0, Not Graduating	8,4
Disability (X₅)	X ₅ = 1, Yes	4,7
	X ₅ = 0, No	95,3
Household Head (X₆)	X ₆ = 1, Working	85,9
	X ₆ = 0, Not Working	14,1
Region (X₇)	X ₇ = 1, Rural	53,8
	X ₇ = 0, Urban	46,2
Province (X₈)	X ₈ = 1, Java	32,2
	X ₈ = 0, non- Java Provinces	67,8

Source: Data processed from Sakernas, 2018

Based on the table above, from the gender characteristics, the results show that women have a higher potential to become NEET than men, with a result of 70.6%. This is in line with Diliaa (2016a) research that women have the potential to become NEET because women have a role to take care of the household. Based on marital status, it shows that samples that already married have the highest proportion of being NEET with 50.6%. This result is similar to research conducted by Wickremeratne & Dunusinghe (2018), which states the married, divorced, and widowed status in Sri Lanka, makes individuals have limitations in work and prioritize the role of taking care of the household, especially Muslim

women. The cultural norms of Islam in Sri Lanka restrict Muslim women from participating in education, work, and training.

In terms of education level, the young population that has the greatest potential to become NEETs are those who graduated from senior high school with 39.7%. The second position is filled by those who are at the junior high school with a value of 23.9%. This phenomenon is of course related to the transition period from school to work as stated by Williamson (1997) that individuals who are at great risk of losing the transition period from school to work are NEET individuals.

The phenomenon of people with disabilities who are likely to become NEET is at 4.7%. S. Adioetomo et al. (2014) argue that people with disabilities have a view that they lack high motivation to succeed and experience obstacles to enter the world of education and employment. Based on the working status of the household head, NEET individuals tend to live in households with working household heads, which amounted to 85.9%. As stated by Genda (2007), living together with a working head of household gives individuals a high potential to remain NEET.

Furthermore, based on the region, where NEET individuals are found more in rural areas than urban areas, at 53.8% and 46.2%. And for the province where NEET individuals live, those who are NEET live outside Java Island compared to other provinces in Java Island with a number of 67.8%. This condition is similar to what Wickremeratne & Dunusinghe (2018a) stated that individuals in rural areas and other areas that lack infrastructure are more likely to become NEET.

Table 4. Proportion of NEETs by Area of Residence and Province

Regional	Province	
	Non-Java	Java
Urban	40,17	59,04
Rural	59,83	40,96

Source: Data processed from Sakernas, 2018

The table above shows that the proportion of NEET between individuals living in Java Island and outside Java Island has a difference when viewed from the area where they live. NEET individuals outside Java Island are mostly found in rural areas, while NEET individuals in Java Island are mostly found in urban areas. The data shows that the region where individuals live define the NEET status. Individu with NEET status live outside Java Island is found in rural area due to lack of adequate infrastructure to provide access to employment information. The lack of available job markets in rural areas is also another reason why in rural areas, especially outside Java, the level of the young NEET population is high (Noh & Lee, 2017b).

Meanwhile, NEET individuals in the Java Island region are mostly found in urban areas due to level of competition for employment in urban areas is indeed higher than in rural areas. Many individuals then choose to migrate from rural areas to urban areas in order to get a better job, so it is not surprising that NEETs in Java are more commonly found in urban areas (Diliana, 2016). Another interesting phenomenon is the most NEET individuals found in rural areas are those with female gender, as shown in the table below:

Table 5. Proportion of NEETs by Area of Residence and Gender

Regional	Gender	
	Men	Women
Urban	53,64	43,17
Rural	46,36	56,83

Source: Data processed from Sakernas, 2018

This is closely related to women's role as housewives and their obligation to take care of the household. This role then limits women from participating in the labor market. Women who take care of the household will of course depend on living with the head of the household who works. It can be seen in the table that men who have a large role as head of the household which have to work and require them move to urbanized areas in order to get a decent job. Therefore, NEET men are found more in urban areas as men who move to the city have to compete fiercely for jobs. (Diliana, 2016; Susanli, 2016; (Wickremeratne & Dunusinghe, 2018a).

The average age of individuals who are NEET is seen at 22 years old. This is the age of completion of undergraduate education, which means the transition period from finishing school to the world of work. According to Williamson (1997), this transition period is indeed the most crucial period, because the population of this age is faced with new challenges. The challenge of entering the world of work will be difficult to pass if the young population is not prepared with adequate skills. Williamson (1997) also adds that when young people stay in this transition period for too long without any activities, it will be difficult for them to enter the workforce. The table below also shows that NEETs mostly appear at the age of 22 and 23.

Table 6. Age Modus of NEET Individuals

Age	NEET	
	Percent	Frequencies
15	2,06%	153
16	2,76%	197
17	3,96%	310
18	7,19%	567
19	8,05%	651
20	7,71%	623
21	7,74%	626
22	8,24%	671
23	8,23%	671
24	7,46%	614
25	8,10%	668
26	6,77%	559
27	7,30%	603
28	7,77%	640
29	6,66%	550

Source: Data processed from Sakernas, 2018

The young NEET population is most prevalent at the ages of 22 and 23. This period of transition from school to work is crucial in determining whether the individual is engaging in activities that would make them fall into the NEET or non-NEET group. The following is the proportion of activities of NEET individuals who are in the labor force and not in the labor force, where it can be seen that NEETs mostly come from those who are not in the labor force. The highest proportion is taken by those who take care of the household, which is 62.02% as seen below:

Table 7. Types of Activities of the NEET Youth Population

Type of Activities	NEET	
	Yes	Not
Working	-	100%
Unemployment	27,92%	-
Taking care of household	62,02%	-
Others	10,05%	-

Source: Data processed from Sakernas, 2018

The young people who fall into the NEET category then reviewed by looking at their activities in looking for work. This activity can then be used as a reference whether the young NEET population is still active in the labor market or not (Noh & Lee, 2017a). The following is the proportion of NEETs who are still actively looking for work and those who are not looking for work according to Sakernas in February 2018:

Table 8. NEETs' Activeness in Job Search

Activities	NEET	
	Yes	No
Want to find a job	24,1	75,9
Willing to accept job offers	43	57
Still want a job	52,4	47,6

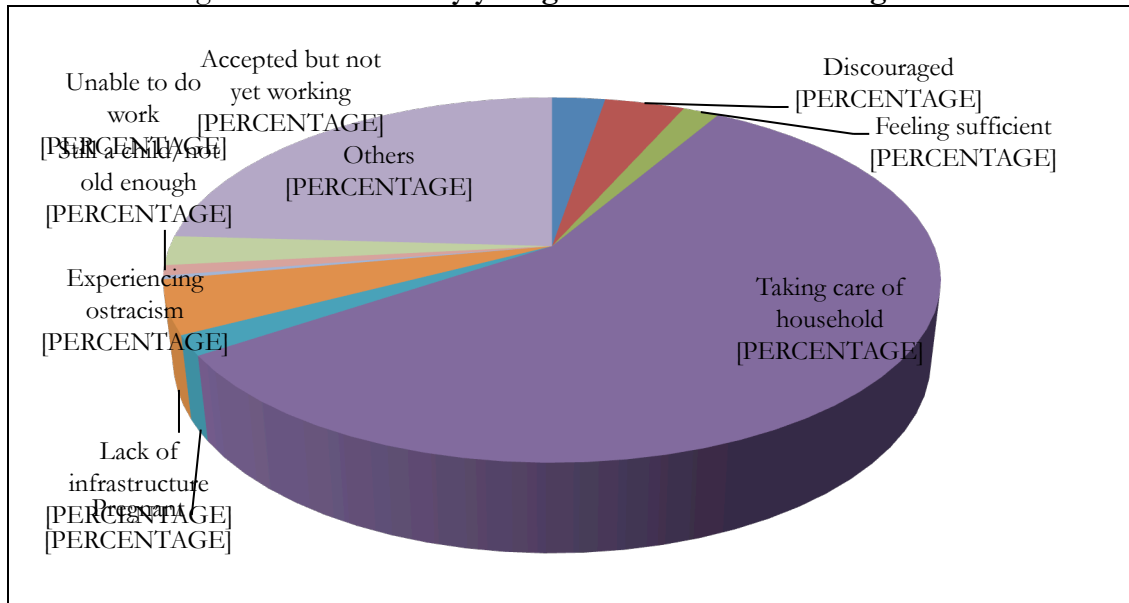
Source: Data processed from Sakernas, 2018

The result that can be seen from table above is that the majority of the young NEET population in Indonesia falls into the NEET category not into labor force. As many as 75.9% of the young NEET population are not actively looking for work, 57% do not accept the job offer given, and 47.6% do not want a job. The conditions that have been mentioned are evidence that the labor force in the age range of 15-29 years has not been optimally absorbed. This condition is in line with research conducted by Genda (2007a) in Japan, where the young NEET population that is not actively looking for work tends to increase. The cause of this condition is that the young population does not have sufficient experience, resulting in a crisis of self-confidence, which in turn has an impact on the unwillingness to look for work.

Genda (2007a) also adds various other reasons why the young NEET population is not active in the labor market, namely because they have experienced work accidents so that they are no longer able to work again. Furthermore, they are no longer actively looking for work because they have given up hope due to not finding a job immediately. Other reasons include taking care of the household, caring for children, and looking after sick family

members. The following illustrates the reasons why the young NEET population is not looking for work in Indonesia.

Figure 3. Reasons why young NEETs are not looking for work.



Source: Data processed from Sakernas 2018

The reason why the young NEET population is not looking for work is mostly due to the individual's obligation to take care of the household with 57%. In accordance with the general description of the young population who enter the NEET in Indonesia, the majority of whom are women, taking care of the household is an important reason why the young NEET population is not actively looking for work. This is consistent with research conducted by Dilia (2016a) and Wickremeratne & Dunusinghe (2018a). "Other" came second with 24%, lack of infrastructure came third with 5%, and hopelessness came fourth with 4%. Other reasons with 2% which filled by individuals unable to do work were then filled in by individuals with disabilities who declared themselves lazy to look for work. Adioetomo et al. (2014) argue that inability to work due to disability is an issue in the young NEET population.

People with disabilities tend to have barriers to entry into the labor market due to their condition. This is confirmed by Genda (2007a) where the inability to work is a barrier for those who want to enter the labor market. Furthermore, Genda (2007a) also adds that the young NEET population is reluctant to look for work because they feel that they are already fulfilled by family welfare. Other than that, it is no longer an urgency for them to look for a job due to the financial support from the working head of the household.

The next reason for individuals not seeking employment is due to a lack of supporting infrastructure. Infrastructure refers to assets, roads, transportation, and employment services (Badan Pusat Statistik, 2018). The lack of infrastructure referred to as the third most common reason for the NEET population not seeking employment shows that the young population needs better access to good jobs. This is in line with Wickremeratne & Dunusinghe (2018a) research in Sri Lanka. The research in Sri Lanka explained that the NEET young population is mostly found in rural areas due to the lack of adequate facilities to support the young population to improve the quality of education and information in

getting a job. Diliانا (2016a) reinforces this statement by proving that the young NEET population is found in rural areas more than in urban areas.

The analysis model in this study is as follows:

$$\begin{aligned} \ln \left(\frac{p}{1-p} \right) = & -2,299 + 1,041gender + 0,0233age + 0,813married \\ & + 0,700divorced + 0,089widowed - 0,283elementary \\ & - 0,717junior - 0,046senior - 0,556diploma - 0,453bachelor \\ & - 1,280master/doctor + 1.594disability \\ & - 0,266workinghouseholdhead + 0,231javaisland + 0,111rural \end{aligned}$$

Furthermore, the independent variables in this study as seen in table 2 together have a significant influence on NEET status with a prob > chi2 value of 0.0000. The model accuracy (goodness of fit) in this study is seen by using the Hosmer-Lemeshow goodness of fit test, where the model is said unsuitable if the p-value is <0.05. The results of the model accuracy state that this research model is appropriate, this is evidenced by the count R2 value of 0.783.

The significance value of each independent variable in this study shows that the independent variables have a significant influence on the dependent variable. The variables of age, gender, marital status, disability, employment status of the household head, region of residence, province of residence have a significant effect on the NEET status of individuals at the 5% significance level, except for the variables of death divorce and high school education level which have no significant effect. Education level variables categorized into six (6) categories, namely uncertified, primary school, junior high school, diploma, bachelor's degree, and master's degree have a significant effect on the NEET status of individuals, but for the variable high school education level has an insignificant effect, while other education level variables are significant at the 5% significance level.

The odds ratio results show that the odds of a young female population are 2.786 times more likely to be NEET than a male population. The odds ratio of the age variable shows that the population aged 15-29 years are 1.024 times to be NEET. Odds ratio of marital status shows that those who are married are 2,254 times more likely to be NEET than those who are not married.

In this study, the education level that is most likely to be NEET is those who do not have a certificate or not graduating from school. Young people who do not have a certificate have a greater chance of becoming NEET with a tendency of 0.754 times compared to those who graduated from primary school education level, 0.488 times compared to those who graduated from junior high school, 0.955 times compared to senior high school, 0.573 times compared to diploma, 0.636 times compared to bachelor, and 0.278 times compared to master/doctoral.

The next variable, disability, shows that those who are disabled are more likely to be NEET with a tendency of 4.926 times than those who are not disabled. The trend of youth population living together with a non-working household head is 0.766 times compared to those who live with a working household head. Thus, the NEET youth population with a non-working household head has less access to employment information. Next is the

region variable where the young population living in rural areas has a chance of becoming NEET with a tendency of 1.118 times than those living in urban areas. The province variable shows that the young population living in Java tends to have a chance of becoming NEET by 1.260 times compared to those living outside Java.

Here are the results of the inferential analysis:

Table 9. Inferential Analysis

Dependent Variable	Categories	Coefficient	Odds Ratio
(1)	(2)	(3)	(4)
Intersept	□ ₀	-2,299*** (0,111)	0,100 (0,011)
Age	Numerical	0,0233*** (0,023)	1,024 (0,004)
Gender	Gender Men (Ref)	1,041*** (0,029)	2,831 (0,081)
Marriage Status	Married	0,813*** (0,036)	2,254 (0,081)
	Divorced	0,700*** (0,103)	2,015 (0,208)
	Widow	0,089 (0,302)	1,093 (0,329)
	Unmarried (Ref)		
Education Level	Elementary	-0,283*** (0,059)	0,754 (0,045)
	Junior	-0,717*** (0,058)	0,488 (0,028)
	Senior	-0,046 (0,056)	0,955 (0,054)
	Diploma	-0,556*** (0,097)	0,573 (0,056)
	Bachelor	-0,453*** (0,073)	0,636 (0,047)
	Master/Doctor	-1,280*** (0,419)	0,278 (0,117)
	Not Graduating (Ref)		
Disability	Yes	1.594***	4,926
	No (Ref)	(0,081)	(0,399)
Household Head	Working	-0,266***	0,766
	Not Working (Ref)	(0,039)	(0,030)
Region	Rural	0,111***	1,118
	Urban (Ref)	(0,028)	(0,032)
Province	Java	0,231***	1,260
	non-Java Provinces (Ref)	(0,029)	(0,037)

***Significant at = 5%

Prob > chi2 = 0.0000

Observation Units = 37893 Individuals

Discussion

Marital status is an independent variable which has an influence on the NEET status of individuals. Wickremeratne & Dunusinghe (2018a) explain that marital status limits the space for young people to work due to the responsibilities they have in taking care of the household. This phenomenon is also reinforced by Susanli (2016) statement that compared to those who are unmarried, the duties and responsibilities of young married people to carry out household chores make them inactive in the labor market. This result also explains the condition of the NEET population in Indonesia in accordance with the descriptive analysis of the research that they are not looking for work because they have to take care of the household. Taking care of the household itself includes taking care of sick and elderly family members.

Marital status later especially early marriage affects young women in some countries reducing their opportunities to continue their studies or separate themselves from economic activity, where they would normally have responsibilities for housework and childcare (AfDB, 2012). In line with Shirahase (2003) who mentions that women who do not continue working or leave the labor market because of their family responsibilities. Young parents, especially women, have NEE status because they have to consciously carry out their responsibilities as parents. Wickremeratne & Dunusinghe (2018a) and Dilia (2016a) also stated that women have a role as housewives, so they have the obligation to take care of housework. Genda (2007a) adds that women cannot be active in the labor market or education because they have to take care of sick family members, small children, and the elderly.

Women's inactivity in the labor market leads to a lack of motivation for them to create networks or connections with the outside world. This lack of connection will cause women to be more likely to be separated from social relationships (Yates & Payne, 2007). The detachment of women from social relations will result in the potential loss of female labor, so that labor productivity is not achieved optimally. Tirtosudarmo (2008) states that the role of women is very important in development, seeing from the relatively large number of women whose productivity can be utilized properly, not inferior to men. The age variable shows that the increasing age of the individual makes it potential to enter NEET, this is justified by Wickremeratne & Dunusinghe (2018a) through their research by stating that the older a person is, the greater the chance of entering NEET. Younger people have a better chance of getting a job than those who are getting older.

The level of education is also an important factor in whether individuals are categorized as NEET or not. The results of the analysis explain that the lower the individual's education, the greater the chance of becoming NEET. This condition is in line with research conducted by the World Bank (2014), where the higher a person's education, the more it can increase the chances of getting a job. Gropello (2013) reinforces this explanation by stating that unemployment is mostly found among people who have a secondary education level. Adioetomo et al. (2014) in the study of youth transition from school to work mentioned that the demand for less educated labor is getting smaller so that youth with low education levels tend to find it difficult to get a job.

Haryanti (2015) also agrees that labor market conditions are better for youth who graduate from university than those who do not go to school and do not finish primary or

secondary school. According to *Understanding Children's Work* (2013), in Indonesia, the higher the education, the less likely it is to drop out of school and in the labor force the higher the chance of becoming unemployed. AfDB (2012) mentions that those with higher education are more likely to exit unemployment than those with lower education. Not only do university-educated youth have the highest rates of unemployment, but they also have the highest wages. This earnings analysis states that this is evidence that with a high level of education they will be paid high wages if they work.

The disability variable refers to whether the youth population has a disability or not. This variable has a significant effect on NEET or non-NEET status. Adioetomo et al. (2014) argue that those with disabilities are potentially inactive in the job market due to lack of motivation and confidence. Genda (2007a) states that the lack of motivation and confidence to enter the labor market does not only occur to those who have been disabled since childhood, but also to those who are disabled due to work accidents. For those who are disabled due to work accidents, entering the labor market does not bring satisfaction since they are not able to work optimally.

The working status of the household head is the next independent variable that has a significant effect on a person's NEET and non-NEET status. Individuals who become NEETs tend to live in households where the head of the household is unemployed. A working household head is a motivation for individuals to follow in the footsteps of the household head in achieving welfare (Diliana, 2016a). With a working adult in the household, the household will have an income so that it could send its children to school so that the human capital of the youth will increase.

The variable of an individual's region of residence has a significant effect on NEET or non-NEET status. Wickremeratne & Dunusinghe (2018a) reinforce this phenomenon through their research in Sri Lanka which shows that the NEET population is mostly found in rural areas. This occurs due to the lack of good facilities in the education sector the lack of employment opportunities in rural areas. Susanli (2016) also states that unpaid work among someone's own family in rural areas is the reason for NEET. This is different from the research conducted by Diliana (2016) which states that the young NEET population is more prevalent in urban areas. There are two things that can explain this, namely, in urban areas, the job market is more competitive and the average income in urban areas is higher than in rural areas. First, many young people come to urban areas with the expectation of working, making the job market more competitive and more difficult to find employment. Second, the average income in urban areas is significantly higher than in rural areas.

This suggests that young people want to earn higher salaries in urban areas than in rural areas (OECD, 2015). In line with this, Tirtosudarmo (2008) mentions that there are more jobs in urban areas, higher average income in urban areas, and more attractive facilities in urban areas. Meanwhile, employment in rural areas is dominated by jobs in the informal sector that do not require certain competencies, such as agriculture and fisheries.

Provincial variables have a significant influence on NEET or non-NEET status. Diliana (2016) confirms this through her research which indeed shows that the NEET youth population is found more on the island of Java. *Understanding Children's Work* (2013) explains that this phenomenon occurs due to the dense population in the area. Population

density results in an increasingly competitive job market, making it difficult to find a job that is suitable and desired by everyone.

Conclusion

The descriptive analysis shows that the majority of young people who are NEET are female, married, not graduated from school, have a disability, live with a working head of household, live in rural areas, and live on the island of Java. Through the descriptive analysis, it can also be seen that the presence of the non-labor force NEET population is greater than those in the labor force NEET group. There are many young people who want a job, but they are less active in looking for a job, and their willingness to accept a job when offered is low. The most common reason for those who are NEET not looking for work also varies, but the biggest one is taking care of the household. This makes them not actively looking for work. Another reason for those who are still actively looking for work but finding it difficult is the lack of adequate infrastructure for them to gain access to better jobs.

The results of the inferential analysis also show that the independent variables in this study are proven to have a significant effect on the chances of individuals becoming NEET or non-NEET. The socio-demographic variable is the variable that has the greatest influence on the status of the NEET youth population. The socioeconomic variable that has the greatest effect is individual education. Individuals with higher education will be more likely not to become NEET. The working status of the household head shows that those who are likely to become NEET are those who live with a non-working household head. Regional variables also have an important influence on the chances of individuals becoming NEET, because those who live in rural areas have the potential to become NEET due to the lack of adequate infrastructure. Meanwhile, based on the province where the individuals live, those who live on the island of Java have a greater chance of becoming NEET, because the level of competition in finding work on the island of Java is higher than those outside Java (Diliana, 2016b).

The young people who are most likely to become NEETs are those who are female and married. This is because women have the responsibility of taking care of the household, so they cannot be active in the labor market. Therefore, a women's empowerment program is needed to improve the economy of women. In addition, there is also a need for a system to support mothers who already have children so that they can still work, such as the provision of more daycare centers both in urban and rural areas.

The next young people who are likely to become NEETs are those with low education, living in rural areas, and living with a non-working household head. This proves that education is still the main reason for them to get a better job. For this reason, there is a need to expand educational facilities to support those who are less able to get a good education. There is a need for regular data collection by the government starting from the smallest unit, the village, regarding the provision of scholarships to young people who drop out of school due to financial constraints.

The lack of infrastructure in rural areas is also a strong reason why young people become NEET, there is a need to improve infrastructure so that access can be built for them to get a good job. Massive and sustainable infrastructure development will open jobs in the

formal sector that can increase the income of the young population. Furthermore, informal sector which dominate job market in rural areas, which has been less able to improve the welfare of the community, it can finally increase its productivity.

The existence of an unemployed household head also makes the individuals living in the household less informed about employment opportunities. Therefore, there is a need to expand the employment network that contains job market information for those who still need information. The provision of training for young people who have just graduated from school in rural and urban areas should be increased. This training is intended to enable young people to acquire skills that are suitable for the job market. Government also needs to improve women's empowerment programs so can boost the women productivity. In addition, there is also a need for a system to support mothers who already have children so that they can continue to work, such as the provision of more daycare centers both in urban and rural areas.

This research is of course not free from various limitations. This study only uses cross section data at one point in the research year. The data used would be better if using panel data, so that the dynamics of changes in the status of individuals who enter NEET or leave NEET can be seen. The data used in this research also only cover the condition of young population before Covid-19 happened. It would be great if the data used could also describe the condition of the young NEET population in the era after the Covid-19 pandemic ended. This limitation can be used as a reference for other researchers when they want to conduct research related to NEET.

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