

1-25-2019

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Pattinasarany, Indera Ratna Irawati (2019) "Not in Employment, Education or Training (NEET) Among the Youth in Indonesia: The Effects of Social Activities, Access to Information, and Language Skills on NEET Youth," *Masyarakat, Jurnal Sosiologi*: Vol. 24: No. 1, Article 2.

DOI: 10.7454/MJS.v24i1.10308

Available at: <https://scholarhub.ui.ac.id/mjs/vol24/iss1/2>

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Not in Employment, Education or Training (NEET) Among the Youth in Indonesia: The Effects of Social Activities, Access to Information, and Language Skills on NEET Youth¹

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Abstrak

Artikel ini membahas prevalensi NEET (Not in Employment, Education or Training/tidak sedang bekerja, sekolah, atau mengikuti pelatihan) di kalangan pemuda usia 15-24 di Indonesia yang secara umum memiliki kehidupan dengan resiko tinggi, rentan, bahkan menghadapi ketidakadilan sosial dalam masyarakat. Analisis terdahulu mengenai NEET di Indonesia yang menggunakan survei mengenai angkatan kerja menekankan pada pekerjaan dan latar belakang pendidikan individu. Berbeda dengan studi terdahulu, artikel ini membangun NEET dengan menggunakan data survei rumah tangga dari SUSENAS (Survei Sosial Ekonomi Nasional) dan MSBP (Modul Sosial, Budaya, dan Pendidikan) tahun 2015. Kekayaan informasi yang dikumpulkan dalam survei ini memungkinkan penulis menganalisis faktor-faktor yang memengaruhi pemuda Indonesia menjadi NEET di luar faktor-faktor yang berkaitan dengan pekerjaan. Dengan menggunakan analisis regresi logit, artikel ini menjelaskan bahwa alasan pemuda Indonesia menjadi NEET didasarkan pada keterlibatan mereka dalam kegiatan-kegiatan sosial, akses informasi yang diperoleh, serta kemampuan membaca dan menulis huruf (Latin, Arab, atau huruf lainnya). Artikel ini menunjukkan bahwa pemuda yang menghadiri pertemuan-pertemuan di lingkungan tempat tinggalnya, yang aktif terlibat dalam kegiatan-kegiatan keagamaan dan/atau komunitas dan pelayanan sosial, yang mengakses internet, serta mampu membaca dan menulis huruf Latin dan huruf lain selain huruf Arab, memiliki kemungkinan lebih kecil untuk menjadi NEET.

Abstract

This article attempts to describe the prevalence of NEET (Not in Employment, Education or Training) among youth aged 15-24 in Indonesia, who in general live in a high risk and vulnerable condition, many of whom are facing social injustice. Previous analyses on NEET in Indonesia utilized labor force surveys; this study emphasizes on employment and education backgrounds of individuals. This article constructs NEET from the household surveys SUSENAS (National Socio-Economic Survey) and related MSBP (Module of Social, Cultural, and Education) of 2015. The richness of information collected in these surveys enables the author to analyze factors affecting Indonesian youth to be NEET beyond those related to employment matters. By using a logistic regression analysis, this article explains reasons for youth becoming NEET based on their engagement in social activities, access to information, and capability to read and write in Latin, Arabic, or other alphabets. This article finds that the youth who attend local meetings, actively engage in religious activities and/or community and social services, access the internet, and can read and write Latin and other non-Arabic alphabets have a lower likelihood to become NEET.

Keywords: NEET, Youth, Indonesia, Logistic Regression

¹An earlier version of this paper was presented at the 2nd International Conference on Social and Political Issues, in Sanur, Bali, on October 29th, 2018.

INTRODUCTION

The term NEET, which stands for Not in Employment, Education or Training, refers to youth who are not engaged in these activities. NEET measures the success of youth in the transition from education to work, the extent to which youth remain out of the education-employment circle (Adioetomo et al. 2014:85). The NEET concept is associated with the potential to address a broad array of vulnerabilities among the youth: unemployment, early school dropout and labor market discouragement (Elder 2015:1). NEET youth carry the risks of skills deterioration, underemployment and discouragement (ILO 2016:viii). In addition, NEET youth are at risk of becoming socially excluded as they comprise mostly individuals with income below the poverty line, who are deficient in skills to improve their economic conditions (OECD 2018).

Many countries worldwide experience NEET phenomenon, regardless of their level of development. The number of youth aged 16-29 in the Organization for Economic Co-operation and Development (OECD) countries in 2012 is reported at 212.0 million. Around 38.4 million of them (or 18.1%) are not in employment, education or training (Carcillo et al. 2018:8). Australia, a country that was not so much affected by the Great Recession of 2008, recorded a total of 580,000 youth out of education and work in 2015; the latter figure represents 11.8% of Australia's total youth population. Moreover, slightly less than two-third of NEET are not seeking work; this is categorized as 'inactive NEET' (OECD 2016). Japan is a country with a shrinking and rapidly ageing population due to a low level of fertility, high life expectancy and limited immigration policy. In 2015, the rate of youth NEET in Japan stood at 10.1%, which corresponds to around 1.7 million youth (OECD 2017). As is the case with Australia, around two-thirds of NEET in Japan are inactive. The Philippines is a country with a relatively young population, of which around half of its population is less than 24 years old. In 2013, around one in four young Filipinos aged 15-24 are categorized as NEET (Bird 2018).

Previous studies on youth NEET in Indonesia focused on the employment and economic aspects, where NEET was estimated using the National Labor Force Survey (SAKERNAS). A longitudinal study on youth NEET conducted by Understanding Children's Work (UCW) covering the periods of 2000-2004 and 2006-2010 finds a small overall

decline in the youth NEET population in Indonesia (Kovrova and Lyon 2013:5). The study also finds that the gradual decline in NEET incidence started in 2003 and was uninterrupted by the economic downturn of 2008-2009. The youth NEET level in 2010 was recorded at 27.6%. In addition, detailed breakdowns show that the downward trend in youth NEET in Indonesia is mostly noticeable among the urban and female youth. Using SAKERNAS 2012, United Nations Population Fund (UNFPA) Indonesia found that the prevalence of NEET among Indonesian youth aged 15-29 stands at 25.1% (Adioetomo et al. 2014:86).² Most of these youth NEET are females, in which most of them are married women with children and/or those with family and child-care responsibilities. A World Bank study in Southeast Sulawesi province reveals that in 2012, a total of 399 thousand out of 1.51 million working age population aged 15-64 are neither working nor studying (World Bank 2014:21). The number of the population in this category is far greater than the number of unemployed at the time (around 41 thousand).³

The use of SAKERNAS in analyzing youth NEET faces some shortcomings. Factors that drive youth not to engage in any employment, education or training activities solely focus on employment-related matters. The main reason is due to limited information on individual and family backgrounds collected in the labor force survey. Kovrova and Lyon (2013), for example, focus on individual characteristics (gender, age and age cohort, and educational attainment), residential location (urban/rural and regions in Indonesia), and macroeconomic conditions (adult unemployment rate). This study seeks to update and enrich analytical works on youth NEET that have been carried out in Indonesia by using national representative household survey data.

This article has three objectives. The first is to update the youth NEET analysis in Indonesia using more recent household survey data. The use of household survey data can provide new point of views in the youth NEET analysis that cannot be undertaken using the labor force survey data. The main data source used in this article is the SUSE-

²Based on Tables 5-7 (Adioetomo et al., 2014:86), we calculate a NEET rate of Indonesian youth aged 15-24 of 23.3%.

³The report does not specifically refer this figure as NEET. In addition, the prevalence of NEET in the report covers the entire workforce (aged 15-64), so it does not represent youth NEET. In spite of such caveat, the report shows the extent that studies on NEET are not focused at the national level only. NEET has become a concern of local governments as well.

NAS (National Socio-Economic Survey) and related MSBP (Module of Social, Cultural, and Education) of 2015. The second objective is to describe the prevalence of youth NEET in Indonesia based on location (i.e., province and urban/rural area), and by individual and household characteristics. Such description is important to know who and where youth NEET is deemed problematic so that it can get the attention of the government and other institutions. Third, to study the factors that drive youth to become NEET. In contrast to previous analyses, this article will look at individual characteristics in more detail, including: marital status, participation in local activities and organizations, access to information media, and mastery of language. The article will also discuss the influence of household background in more depth, such as: the gender of the head of household, composition of household members, house ownership status, and participation in social assistance programs-.

RESEARCH METHOD

Definition and Operationalization of the definition of NEET

Elder (2015) documented the absence of an international standard for the definition of NEET. Nevertheless, prominent international organizations, such as the Eurostat and International Labor Organization (ILO), have adopted the following definition of the NEET rate: 'the percentage of the population of a given age group and sex who is not employed and not involved in further education or training' (Elder 2015:1).

In technical terms, Elder (2015) further stated that the ILO defined NEET rate as:

$$\text{NEET rate (\%)} = \frac{\text{Number of youth} - \text{number of youth in employment} + \text{number of youth not in employment who are in education or training}}{\text{Total number of youth}} \times 100$$

A more complex (but more practical) definition of NEET by ILO is as follows:

$$\text{NEET rate (\%)} = \frac{(\text{Number of unemployed youth} + \text{number of youth not in the labor force}) - (\text{number of unemployed youth who are in education or training} + \text{number of youth not in the labor force who are in education or training})}{\text{Total number of youth}} \times 100$$

Components that make up NEET on the numerator side are calculated based on survey data, while the individuals included in the NEET calculation are determined on the denominator. The question is who is defined as a youth? To date, there have been no standards agreed upon by international institutions and research institutions related to the definition of youth, especially regarding the age range of youth. Indonesia Law on Youth⁴ defines youth as individuals in the 16 to 30-year age range. Indonesia's Central Bureau of Statistics (BPS) publishes an annual report on youth where the age of youth is defined following the Law on Youth, which is 16-30 years.⁵

The United Nations (UN) in their biennial reports on youth (The World Youth Report) applies the definition to individuals between the ages of 15 and 24.⁶ The Population Reference Bureau (PRB), in its 2017 edition of World Population Data Sheet, which focuses on youth, defines the youth as individuals aged 15-24 years (PRB 2017). Meanwhile, the UNFPA, for the purpose of developing its Framework for Action on Adolescents and Youth, differentiates between adolescents and youths. Adolescents are defined as those aged 15-19 years while youths are defined as those aged 15-24 years (Adioetomo et al. 2014).⁷ This article, with the intent of making easy comparisons with other countries, follows the youth definition of the UN and PRB (which focuses on individuals aged 15-24 years).

As dictated by the SUSENAS and MSBP data and the previously mentioned ILO NEET rate definition, this article defines NEET as (a)

⁴Law 40/2009 on Youth (Undang-Undang Republik Indonesia Nomor 40 Tahun 2009 tentang Kepemudaan).

⁵In this article we will quote some information from Indonesian Youth Statistics in 2015 (BPS 2016). This report uses the same data sources as used in this paper, namely SUSENAS and MSBP 2015. However, readers are expected to be cautious as this paper and the BPS report use different definitions of youth.

⁶See, for example, The World Youth Report 2018, which focuses on the 2030 Agenda for Sustainable Development (UN 2018). The report provides an adequate portion of the discussion regarding NEET because NEET indicators are part of the Sustainable Development Goal 8.

⁷UNFPA characterizes three types of youth aged 15-29 years: transitional youth/ adolescent youth (aged 15-19), establishing youth (aged 20-24), and established youth (aged 25-29). Each of these groups faces its specific challenges. Transitional youth challenges include inadequate schooling, early marriage and parenthood, and knowledge about sexual and reproductive health. Establishing youth faces job search and unemployment, growing independence, and housing/accommodation, while established youth deals with income security, employment, and social pressure to marry and have children.

individuals who, during the week before survey, engage in taking care of household without pay, (b) individuals who engage in activities such as sports, taking courses, picnics, social activities (e.g. local organization and community services), and religious worship activities (e.g. Ta'lim assembly/recitation), or (c) individuals who do not carry out activities.⁸ Excluded from the above definition are (a) individuals who currently have jobs/business but temporarily do not work, (b) individuals who have been accepted to work but have not yet started working, and (c) individuals who are attending school.

Data

Main source of data utilized in this article is the National Social Economic Survey (SUSENAS) and related Social Cultural and Education module (MSBP) 2015. The SUSENAS is conducted annually and is representative at the district (comprises regencies [kabupaten] and municipalities [kota]) level, while the module is administered every three years and is representative at the province level. It is worth noticing that this paper departs from typical studies on NEET in Indonesia which uses the National Labor Force Survey (SAKERNAS) (see Kovrova and Lyon 2013; Adioetomo et al. 2014). The main reason for utilizing the SUSENAS data instead the SAKERNAS is the extent that SUSENAS collected rich individual-and household level information so that it can explain NEET based on different perspectives from those of previous studies. Therefore, this study can enrich our understanding of NEET and the factors that caused it in Indonesia.

⁸The main question to construct NEET reads "During the past week, what activities have been carried out?" Available responses options are: working, attending school, taking care of household, doing other than personal activities, and not doing activities. Respondents can choose more than one response options. Working is defined as the activity of doing work with the intention of obtaining or helping to earn income or profits for at least one hour in the past week. Attending school refers to attending formal and non-formal schools (i.e., equivalency education) in primary, secondary, tertiary education. Taking care of household is an activity to take care of the household (such as cooking, washing and cleaning the house) without being paid/getting a salary. Doing other than personal activities refers to doing activities such as sports, taking courses, picnics, social activities (e.g. local organization and community services) and religious worship activities (e.g. ta'lim assembly/recitation). Not doing activities if the respondent during the past week did not work, attend school, take care of the household, and other activities other than personal activities. For more details see BPS (2015).

*Explaining the Probability of Youth Becoming NEET:
Model Specification*

The youth is assumed to make decisions regarding the activities they will carry out. The decision is very much influenced by their individual traits, household characteristics where they came from, and the environment in which they live (including local government policies). A wealthy youth who graduated from senior high school can afford to not engage in employment or to not pursue college education; such options are not available for a similar youth from a poor family. Similarly, the female youth who come from family who hold the tradition of early marriage do not have the opportunity to continue their education to a higher level or work to earn income; they instead have to focus on taking care of the household work, child bearing and rearing. Therefore, the probability of youth becoming NEET (or the opposite) is a well-defined event that can be mathematically modeled.

We postulate a model of the likelihood of youth becoming NEET, which consists of individual traits, household characteristics as well as location-specific information. Individual level information comprises gender, age, education attainment, marital status, mastery of languages, access to information, participation in local meetings (such as village or community level meetings), and participation in local organizations; while household level information includes gender of household head, composition of household members by age group, per capita expenditure, status of house ownership, ownership of financial savings, and participation in social assistance programs. In addition, to study the influence of the location-specific enabling environment—such as socio-economic conditions, traditions and customs, and local policies—we include urban/rural and province binary variables.

The relationship between the probability of youth not engaging in employment, education or training and various explanatory variables of interest is posited in a simple (latent) regression model:

$$y^* = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

where: y^* is unobserved probability of youth becoming NEET; X_1 is a vector of individual traits; X_2 is a vector of household characteristics; X_3 is a vector of urban/rural and province binary variables; and ε is the error term, which is assumed to follow a logistic distribution.

The link between the observed binary y and the latent y^* is made with a simple measurement equation:

$$\begin{aligned} y &= 1 \text{ if } y^* > 0 \\ y &= 0 \text{ if } y^* \leq 0 \end{aligned}$$

This equation is estimated using a logistic (or logit) regression and the maximum likelihood method with a robust variance estimator.⁹ We expect that the determinants of NEET have different directions, magnitudes and significance according to youth gender, we will also estimate separate logit regressions for male and female samples. Estimation results will be discussed in Section 4.

THE PREVALENCE OF NEET

Based on the definition of NEET as described in the Research Method section, we estimate a youth NEET rate in Indonesia of 23.8%.¹⁰ This implies that almost one in every four individuals aged 15-24 in Indonesia is neither in employment nor in education or training.¹¹ This rate is lower than that found by the UCW study, which found a NEET prevalence of 27.5% using SAKERNAS 2010 data (Kovrova and Lyon 2013). Nevertheless, the study also recorded a declining trend in youth NEET prevalence in Indonesia since 2003. Our calculation is also similar to UNFPA report, which found a (calculated) NEET rate of 23.3% using SAKERNAS 2012 data (Adioetomo et al. 2014). ILOSTAT, an employment-related data source managed by the ILO, calculates NEET rates for almost all countries in the world. In estimating NEET in Indonesia, ILOSTAT uses SAKERNAS data. For 2015, ILOSTAT estimated the prevalence of NEET at 22.9%.¹² Overall, it is fair to conclude that the youth NEET

⁹The logistic (logit) regression is used to estimate the binary response model, where the dependent variable takes on only two values: zero and one. An analogous model of logit is the probit. Kovrova and Lyon (2013) employed probit regressions in explaining the determinants of Indonesian youth not in the labor force or education. Salvà-Mut, et al. (2018) also utilized probit regressions in estimating the determinants of NEET among youth in Spain. For more on logit (as well as probit) regression models, see Wooldridge (2002:Chapter 17).

¹⁰In 2015, there were 61.8 million youth (or 24.2% of the total population) aged 16-30 in Indonesia (BPS 2016).

¹¹Youth NEET rate is not available in the annual BPS (Indonesian youth statistics) publication, so we cannot compare our calculations with the official figures.

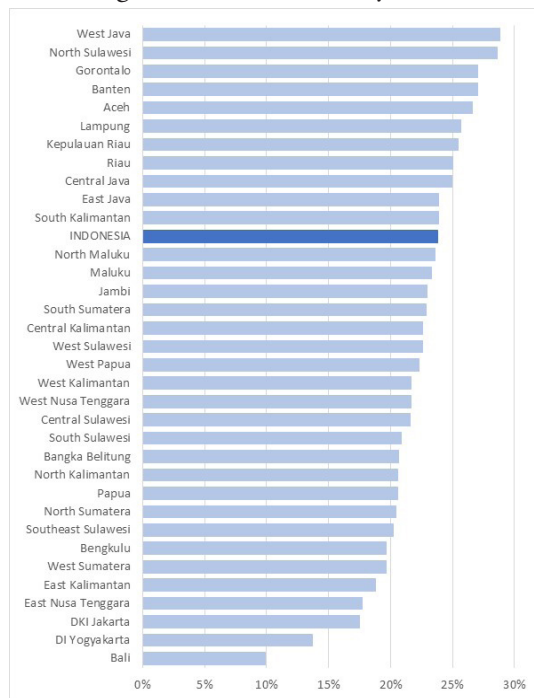
¹²Youth NEET rate data for Indonesia in ILOSTAT is available annually since 2000. Source: http://www.ilo.org/ilostat/faces/oracle/webcenter/portallapp/pagehierarchy/Page3.jspx?MBI_ID=20.

rate that we estimated here are equivalent to those carried out by other researchers and international organization reports.

Disparities of NEET among Provinces

As each province in Indonesia has different economic, social, and culture characteristics, the rates of youth NEET are expected to differ across provinces. Such variation is presented on Figure 1. Eleven of the 34 provinces have a youth NEET rate higher than the national average. Of the eleven provinces, four are located in the Java region.¹³ Java is the most advanced region in Indonesia, both economically and the in terms of availability of basic infrastructure. Nevertheless, four out of the six provinces in Java have youth NEET rates that are higher than the national average.

Figure 1. NEET Rates by Province

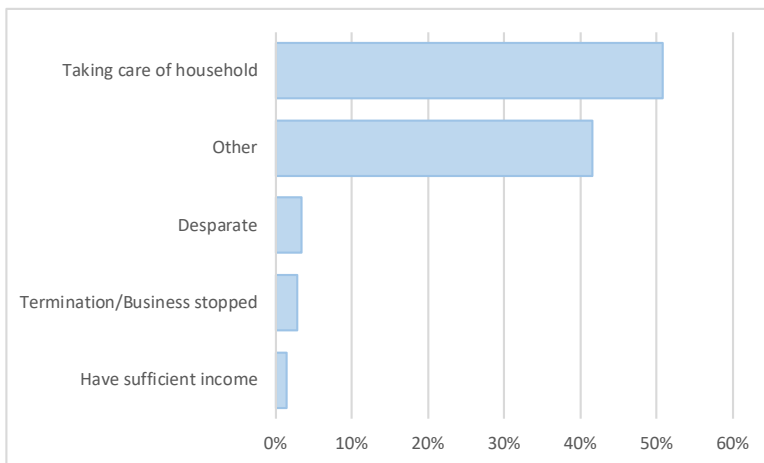


Source: Author's calculations using the SUSENAS and MSBP 2015 data reference and year

¹³Around 55.6% of youth aged 16-30 live in the Java region in 2015. The proportion of youth living in Sumatra is 22.6%, Kalimantan 6.3%, and Sulawesi 7.3%, while the remaining 8.2% are spread in Bali, Nusa Tenggara, Maluku and Papua (BPS 2016).

West Java tops the list with a NEET rate of 28.8%,¹⁴ followed by North Sulawesi (28.6%) and Gorontalo (27.0%). The three provinces with the lowest prevalence of youth NEET are Bali (9.9%),¹⁵ Yogyakarta Special Region (13.7%), and Jakarta Capital Region (17.5%). It is interesting to learn that Jakarta (the capital of Indonesia) has a low proportion of youth not engaging in employment, education or training, while its two neighboring provinces, West Java (28.8%; 1st) and Banten (27.0%; 4th), are on the opposite end. Note that low youth NEET prevalence in a province does not necessarily correlate with a high level of welfare in the province. The low level of NEET can be caused by youth working in low productivity jobs in the informal sector (such as street vendors, peddlers, etc.)

Figure 2. Reasons for being NEET



Source: Author's calculations using the SUSENAS and MSBP 2015 data

Figure 2 shows that reasons for not engaging in employment, education or training¹⁶ is dominated by taking care of household (50.7%). Around 3.4% of youth stated that they were desperate seeking employ-

¹⁴The high prevalence of youth NEET in West Java is supported by the low labor force participation rate (57.3%). In 2015, West Java ranked 30th out of 34 provinces in terms of labor force participation (BPS 2016:196).

¹⁵The labor force participation rate in Bali in 2015 (70.0%) was second only to Papua (BPS 2016:196).

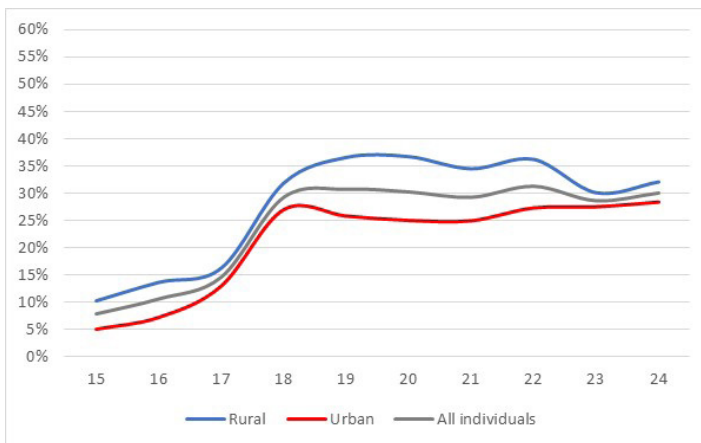
¹⁶MSBP solicited information regarding respondents' main reasons for not working. The extent that respondents in this study have been restricted to those who do not

ment and felt they could not get a job. Another 2.8% became NEET due to termination of employment, or closure of the business they formerly run. And around 1.5% stated that they were neither looking for work nor preparing a business because they felt they already had sufficient income (e.g. from non-work-related activities).¹⁷ Women, both in rural and urban areas, tend to attest that they are taking care of household as reason for not engaging in working, while men are more likely to state the final three reasons.

Disparities of NEET between Urban and Rural Areas

As expected, NEET rates also differ between youth residing in urban and rural settings.¹⁸ Overall NEET incidence among urban youth (21.0%) is lower than that of their rural counterparts (26.8%). Kovrova and Lyon (2013) also found that, in 2010, the youth NEET rate is more prevalent in rural (31.2%) rather than in urban (23.1%) areas. In contrast, they found that reverse is true in Brazil, where NEET rate among rural youth (19.2%) is lower than that of urban youth (23.9%).

Figure 3. NEET Rates by Urban/Rural and Age



Source: Author's calculations using the SUSENAS and MSBP 2015 data

engage employment, education or training, the reasons for not working become the reasons for being NEET

¹⁷'Other' refers any other reasons beyond the previously mentioned ones.

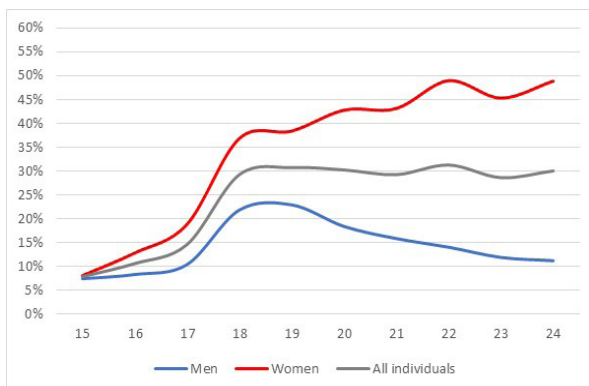
¹⁸In 2015, the proportion of youth aged 16-30 living in urban areas (25.4%) was higher than those living in rural settings (23.0%) (BPS 2016).

Figure 3 illustrates the prevalence of NEET in urban and rural areas (as well as overall) disaggregated by age. Overall, the prevalence of NEET increases with age of youth up to the age of 18 years, which coincides with the age of individuals completing senior high secondary education. Subsequently, NEET rates tend to fluctuate at the level of 30-31%. NEET rate patterns in rural and urban areas follow the overall pattern; however, the prevalence of NEET in rural areas at each age of youth is always higher than that in urban areas.

Disparities of NEET between Genders

Our calculations show that, overall, the prevalence of female youth NEET (33.9%) was twice as high as that of male youth NEET (14.0%).¹⁹ Adioetomo et al. (2014) reported (calculated) NEET rates of 15.6% for males and 31.1% for females in 2012. International data also show that NEET rates for women are significantly higher than those of men. The latter applies in almost all low-, lower middle-, and upper middle-income countries, while among high-income countries, the prevalence of NEET for females and males is almost at par; and in some countries (such as Italy, Spain, and Sweden) the prevalence of NEET for females is slightly lower than that of males (PRB 2017).

Figure 4. NEET Rates by Gender and Age

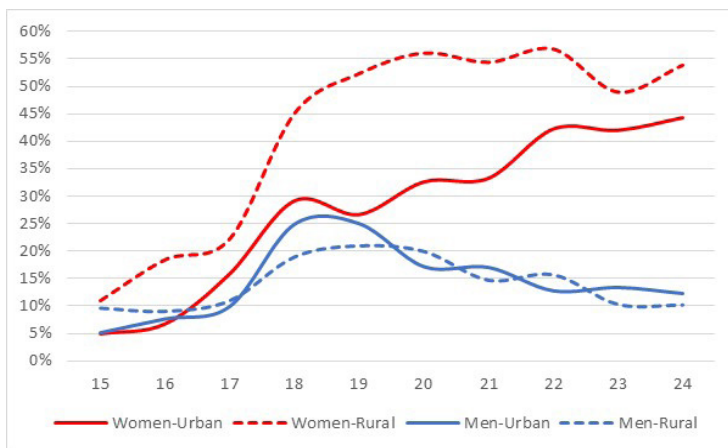


Source: Author's calculations using the SUSENAS and MSBP 2015 data

¹⁹The proportion of male youth aged 16-30 in 2015 (24.4%) is only slightly higher than that of female youth (24.0%) (BPS 2016).

When disaggregated by youth age, NEET rates for males and females follow different pathways (Figure 4). The prevalence of women who are not working, studying or attending training increased significantly since the age of 18, while the rate for men decreased significantly. At 24 years of age, the prevalence of female youth NEET is 48.9% or nearly 1 in 2 female youth are categorized as NEET, while the prevalence of male youth NEET (11.3%) is only a quarter that of females.

Figure 5. NEET Rates by Gender, Urban/Rural, and Age



Source: Author's calculations using the SUSENAS and MSBP 2015 data

Further disaggregation of data (according to gender, urban/rural, and age) shed light on the prevalence of NEET among females. Figure 5 shows striking difference between NEET rates of women who reside in rural and urban areas. Rural women aged 18-22 have a prevalence of NEET that is 15-26% higher than urban women. The NEET rate among rural women reaches 56.2% at the age of 22. Whereas among men, there is no noticeable difference in NEET rates between those living in rural and urban areas.

The high level of female youth NEET rates, both in urban and rural areas, is caused by the high number of women who only take care of the household without engaging in any work activities (to earn income) or learning (such as taking equivalency education). The prevalence of NEET of young women in this category is 64.3% for those who live

in urban areas and 74.4% in rural areas. Whereas, male youth NEET who asserted to be only doing household work is only 4.8% for those residing in urban areas and 6.3% in rural areas. Comparable findings were also stated by Adioetomo et al. (2014).

Another reason that can explain the high prevalence of NEET in youth women is the high rate of marriage. The data comprised of 47.7% respondents aged 15-24 who were ever married. Female respondents (48.3%) are slightly more likely to be ever married than their male (47.1%) counterparts. What is worrying is the very high prevalence of NEET among married female youth (64.5%), while NEET rate among unmarried female youth is about 19.1%. On the other hand, only one in 20 (or 4.7%) ever married males are not engaged in employment, education or training. Meanwhile, the NEET rate among ever married male youth stands at 15.1%. We interpret the finding that ever married male youth tend to avoid becoming NEET (by engaging in employment or continuing education), while ever-married female tend to become NEET (by engaging in household work).

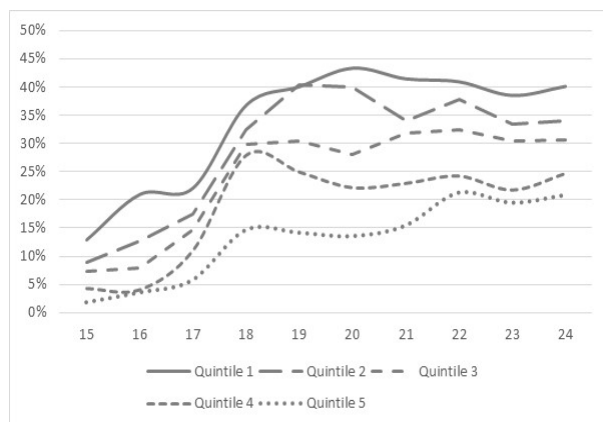
Disparities of NEET among Quintiles of Per Capita Expenditures

Household per capita expenditure (PCE) is used as a proxy for household's level of income. The magnitude of PCE is grouped into five quintiles, of which the first quintile (Quintile 1) comprises the poorest households and the fifth quintile (Quintile 5) represents the richest households. Figure 6 shows NEET rates across five PCE quintiles disaggregated by youth age. As expected, youth belonging to the richest PCE quintile have the lowest NEET prevalence (13.2% overall); while those belonging to the poorest PCE quintile have the highest NEET rate (32.4%).

Policy makers usually focus on programs and activities to improve the welfare of the two poorest quintiles (or bottom 40% of the population), including, among other things, ensuring the availability of decent work and improving access to equivalency education and skill improvement training centers. Nevertheless, the fact that there are 14-21% of youth aged 18-22 from the richest quintile that do not participate in employment, studying or training needs special attention. The latter is assumed to have graduated from senior high school and have sufficient resources to work, start their own business or pursuing

tertiary education. Instead they chose to be idle and wasted away the opportunity to gain experience or knowledge that will be useful for their future.

Figure 6. NEET Rates by PCE and Age



Source: Author's calculations using the SUSENAS and MSBP 2015 data

DETERMINANTS OF YOUTH BECOMING NEET

Descriptive evidence on the prevalence of youth NEET presented in previous section is important as they show the dynamics of NEET rates when survey respondents are disaggregated by administrative area (i.e., provinces, and rural/urban areas), main individual traits (i.e., age and gender) and household characteristics (i.e., household per capita expenditure). Such evidence, however, has limited analytical value as it does not separate individuals from other confounding effects of socio-demographic factors. This section presents more robust evidence that simultaneously take into account age, gender, area of residence, and household income as well as controlling for key socio-demographic variables. Since men and women consider different factors in deciding to become NEET, the estimation results for these groups are also presented separately (Table 1). It should be noted that variations in macro-economic and socio-cultural conditions, as well as various policies (such as education, employment, and other policies related to the transition between schools and work) between regions are accommodated in the

province binary variables. To conserve space, estimates on the latter are not reported on Table 1.

Individual Traits

Individuals who are not participating in employment, education or training are more prominent among women aged 15-24 rather than men. Holding other variables constant, being a woman implies a 15.4% higher likelihood to be categorized as NEET, relative to being a man. Kovrova and Lyon (2013) also estimated a higher likelihood of women becoming NEET (relative to men) for Brazil and Indonesia, Ranzan and Rosati (2013) for Mexico, and Salvà-Mut, et al. (2018) for Spain.

Age variables enter the logit equation in nine binary variables, each representing the age of youth. Individuals aged 15 serve as the baseline case. In the 'all observations' estimates, the marginal effects estimates show that, relative to individuals aged 15, individuals aged 16-24 are more likely to be categorized as NEET. The possibility of youth becoming NEET increases up to the age of 18. Holding other variables constant, individuals aged 18 have 17.5% higher chance to become NEET. Subsequently, the likelihood decreases with age.²⁰ Disaggregated by sex, estimates of age variables follow an inverted U-shape curve, although there are fluctuations in the estimates for women. Men aged 23-24 have a lower probability (relative to men aged 15) to become NEET as the estimates are negative.

Obtaining higher education attainment is associated with lower odds of being NEET. Overall, youth completing junior secondary, senior secondary, and tertiary level of education have, respectively, 0.3%, 3.5% and 8.2% less likelihood of being categorized as NEET. Therefore, obtaining higher levels of formal education attainment increases individual odds to avoid becoming NEET. It interesting to note that the decline in the likelihood to become NEET is higher among women than among men. Having senior secondary education among men is associated with a 0.9% decrease in the opportunity to become NEET (relative to men with at most primary level education), while the corresponding figure among women respondents is 6.18%.

²⁰Age binary variable estimates follow an inverted U-shape curve. Kovrova and Lyon (2013), who also include age variables in the form of binary variables, reported an increase in the probability of Indonesian youth becoming NEET up to the age of 19 years, followed by a decrease in such probability with increasing age of youth.

This implies that schooling attainment is more 'meaningful' in reducing the likelihood to become NEET among females than among males.

Holding other variables constant, being ever married among men means a 17.1% lower likelihood to become NEET (in comparison to unmarried men), probably due to responsibility to earn income for his family. The reverse is true among women; living in a marriage bond among women is associated with a 17.7% higher probability of being NEET (relative to unmarried women). As discussed in the previous section, most of the NEET women focus on household work obligations. The extent that the majority of married women are mostly engaged in household work (which, presumably, includes child bearing and rearing) is a non-optimal use of human resources capacity, considering the education they have obtained, and the potential work experience they can gather.

Household Characteristics

Our estimates show that males aged 15-24 belonging to households headed by females are 2.1% more likely to become NEET. The reverse is true for females, in which young women coming from female-headed households are 3.4% less likely to neither engage in working nor studying or training. A report by SMERU and the National Secretariat for Empowering Female Heads of Households (PEKKA) stated that, in general, the living conditions of families with female household heads are worse than those with male household heads. The former, among other things, have lower labor force participation and employment opportunities, as well as lower children school participation than the latter (SMERU et al. 2014).

Table 1. Marginal Effects of Logit Estimates of Factors affecting NEET

	All observations		Men		Women	
	Coef	SE	Coef	SE	Coef	SE
Individual characteristics:						
Female	0.1539	(0.0001) ***				
Age 16	0.0302	(0.0003) ***	-0.0030	(0.0003) ***	0.0622	(0.0004) ***
Age 17	0.0687	(0.0003) ***	0.0122	(0.0003) ***	0.1153	(0.0004) ***
Age 18	0.1752	(0.0003) ***	0.0862	(0.0004) ***	0.2459	(0.0004) ***
Age 19	0.1458	(0.0003) ***	0.0764	(0.0004) ***	0.1911	(0.0004) ***
Age 20	0.1294	(0.0003) ***	0.0349	(0.0003) ***	0.2085	(0.0004) ***
Age 21	0.1083	(0.0003) ***	0.0233	(0.0003) ***	0.1774	(0.0004) ***
Age 22	0.1159	(0.0003) ***	0.0162	(0.0004) ***	0.2153	(0.0005) ***
Age 23	0.0743	(0.0003) ***	-0.0016	(0.0003) ***	0.1477	(0.0005) ***
Age 24	0.0808	(0.0003) ***	-0.0017	(0.0004) ***	0.1692	(0.0005) ***
Education: Junior Secondary	-0.0029	(0.0002) ***	-0.0218	(0.0002) ***	0.0031	(0.0003) ***
Education: Senior Secondary	-0.0354	(0.0002) ***	-0.0085	(0.0002) ***	-0.0618	(0.0003) ***
Education: Tertiary	-0.0821	(0.0003) ***	-0.0162	(0.0004) ***	-0.1223	(0.0004) ***
Married	0.0927	(0.0002) ***	-0.1711	(0.0004) ***	0.1770	(0.0002) ***
Alphabet: Latin	-0.0950	(0.0007) ***	-0.1491	(0.0006) ***	-0.0201	(0.0010) ***
Alphabet: Arab	0.0173	(0.0001) ***	0.0088	(0.0002) ***	0.0264	(0.0002) ***
Alphabet: other	-0.0136	(0.0003) ***	-0.0115	(0.0004) ***	-0.0173	(0.0004) ***
TV	0.0513	(0.0003) ***	0.0213	(0.0003) ***	0.0811	(0.0004) ***
Newspapers/Magazines	-0.0001	(0.0002)	0.0158	(0.0003) ***	-0.0102	(0.0003) ***
Internet	-0.0253	(0.0002) ***	-0.0053	(0.0002) ***	-0.0271	(0.0002) ***
Attended local meetings	-0.0283	(0.0002) ***	-0.0073	(0.0002) ***	-0.0136	(0.0003) ***
Activities: religion	-0.0081	(0.0001) ***	-0.0120	(0.0002) ***	-0.0116	(0.0002) ***
Activities: sports	0.0030	(0.0002) ***	0.0155	(0.0002) ***	-0.0406	(0.0003) ***
Activities: <i>gotong royong</i>	-0.0354	(0.0001) ***	-0.0294	(0.0002) ***	-0.0195	(0.0002) ***
Activities: other social	0.0185	(0.0001) ***	0.0112	(0.0002) ***	0.0055	(0.0002) ***
Household characteristics:						
Female-headed household	-0.0116	(0.0002) ***	0.0207	(0.0002) ***	-0.0338	(0.0003) ***
#HH member aged 0-4	0.0069	(0.0001) ***	-0.0132	(0.0002) ***	0.0162	(0.0002) ***
#HH member aged 5-14	0.0000	(0.0001)	-0.0032	(0.0001) ***	0.0025	(0.0001) ***
#HH member aged 15-59	-0.0021	(0.0000) ***	0.0000	(0.0001)	0.0056	(0.0001) ***
#HH member aged 60+	-0.0003	(0.0001) **	-0.0028	(0.0001) ***	0.0085	(0.0002) ***
PCE: Quintile 2	-0.0188	(0.0002) ***	-0.0150	(0.0002) ***	-0.0241	(0.0003) ***
PCE: Quintile 3	-0.0450	(0.0002) ***	-0.0525	(0.0002) ***	-0.0403	(0.0003) ***
PCE: Quintile 4	-0.0725	(0.0002) ***	-0.0740	(0.0002) ***	-0.0776	(0.0003) ***
PCE: Quintile 5	-0.0899	(0.0002) ***	-0.0886	(0.0003) ***	-0.0951	(0.0003) ***
Own house	0.0133	(0.0002) ***	0.0187	(0.0002) ***	0.0029	(0.0002) ***
Social protection: KPS/KKS	-0.0108	(0.0001) ***	-0.0088	(0.0002) ***	-0.0117	(0.0002) ***
Health: KIS/BPJS-PBI	0.0017	(0.0001) ***	0.0053	(0.0002) ***	-0.0009	(0.0002) ***
Savings	-0.0128	(0.0001) ***	0.0012	(0.0002) ***	-0.0256	(0.0002) ***
Regional characteristics:						
Urban	-0.0004	(0.0001) ***	0.0153	(0.0002) ***	-0.0194	(0.0002) ***
p-value of Wald Chi2	0.0000		0.0000		0.0000	
Pseudo R2	0.2288		0.1314		0.2834	
Observations	40,743		20,921		19,822	

Source: Author's calculations using the SUSENAS and MSBP 2015 data

Notes: Controls for provinces are included but not shown. Robust standard errors are in parentheses. *, **, and *** denote significance at the 10, 5, and 1 percent levels.

Family composition also explains youth likelihood to be categorized as NEET; and the effect differs between male and female respondents. Having family members under 5-year old as well as having elderlies (defined as those aged 60+) in the household are correlated with lower chance of being NEET among men, but higher likelihood of becoming NEET among women. For each household member under 5-year old, men are 1.3% less likely, while women are 1.6% more likely to become NEET. Likewise, for each elderly household member, men are 0.3% less likely, and women are 0.9% more likely to be categorized as NEET. The extent that women are more responsible than men for taking care of younger members and elderlies in the household are well documented (see, among others, World Bank, 2018), not only in Indonesia but also in most developing countries.

Household welfare variables, proxied by quintiles of household per capita expenditure (PCE), are negatively associated with the likelihood to become NEET. The richer the household is, the less likely the youth is to be categorized as NEET. Holding other variables constant, belonging to the richest household quintile is associated with a 9.0% less likelihood to neither engage in employment nor in education or training in comparison to those belonging to the poorest household quintile.

Two variables to proxy household endowments in the logit estimates are house ownership status and the possession of any savings at both bank and non-bank institutions. Youth residing in their own family house are associated with a 1.3% higher chance of being NEET. Such counter-intuitive findings apply to both men and women samples, while individuals from families that have financial savings are 1.3% less likely to become NEET.

Individuals belonging to households that are beneficiaries of social protection programs (such as the provision of conditional cash transfers for the poor) are associated with lower likelihood to be categorized as NEET. However, participating in national health care programs (which in 2015 were intended for the poor) correlates with a higher probability of becoming NEET.

Participation in Local Activities and Organizations

The prevalence of NEET is strongly influenced by youth participation in local organizations and activities. By engaging in such participation, a youth may have the opportunity to interact with their

surrounding community members (and beyond) so that they can have better chance to carry out productive activities or taking part in skill-enhancing trainings. However, such participation can also end up in activities that are not economically productive.

Youth social activities, such as their presence in local meetings (village or community deliberation meetings) lower the likelihood of being NEET. Individuals who are actively engage in religious activities (such as Quran recitation, religious celebrations, religious lectures, etc.) and/or community and social services have lower likelihood to be NEET, while being actively engaged in sports and other social activities (such as arts, Posyandu/weighing babies activities, etc.) is associated with higher probability to neither engage in employment nor in education or training. As a comparison, in Germany, youth unemployment is associated with a higher likelihood of disengagement in social relations and community participation (Sonnenberg 2013:97).

Access to Information

Access to information is an important factor to explain individual likelihood to be categorized as NEET. Having good access to information can increase chances for youth to get information about their livelihood, find employment opportunities or start/run their own business, and get knowledge in entrepreneurship (Yusup et al. 2013:34). The problem of unemployment in Indonesia is caused, among others, by the lack of information. Job seekers lack, or even do not have, access to information about employment opportunities, such as companies or institutions that need employees (Franita 2016:90).

In this article, access to information is proxied by individual habit of watching TV, reading newspapers/magazines, and accessing the Internet. Watching TV is associated with increasing the odds to neither engage in employment nor in education or training. Reading newspapers/magazines have no effect on being NEET among all individuals. However, upon disaggregating by sex, male who reads newspaper/magazines are 1.6% more likely to become NEET, while female who do likewise are 1.0% less likely to become one. Accessing the Internet coincides with 2.5% less likelihood to be categorized as NEET; the effect is lower among men (0.5%) than women (2.7%).

Mastery of Language

Discussion about mastery of language is important because language has a role, among others, in promoting employability (Elisabeth 2015:5). This article uses the MSBP module that solicits individuals' ability to read and write simple words/sentences in Latin letters, Arabic letters, or other letters (e.g. Japanese, Chinese, Javanese, etc.). Simple sentences refer to sentences that contain words that are commonly used in everyday life and at least contain subjects and predicates. Mastery of reading and writing Latin and other letters correlates with decreased odds of becoming NEET. However, a higher ability to read and write in Arabic letters is associated with a higher probability to be neither engaged in employment nor in education or training. The findings are somewhat in parallel with those of twelve European countries in which the mastery of foreign languages increases the likelihood of a person earning a higher income by 5.8% and reducing the likelihood of a person becoming unemployed by 3.2% percent (Donado 2014:1). Furthermore, mastery of English and German languages provides the highest opportunity to increase income and reduce unemployment opportunities (Donado 2014:28). The mechanism of youth participation in local activities and organizations, access to information, and mastery of language are worth exploring in future analysis as each of them plays a significant role in the determinants of youth NEET.

CONCLUSION

This article attempts to construct prevalence of Indonesian youth aged 15-24 who are not engaged in employment, education or training (NEET) by utilizing household survey data, the 2015 round of the SUSENAS (National Socio-Economic Survey) and related MSBP (Module of Social, Cultural, and Education). This article seeks to update and enrich analytical works on youth NEET that have been carried out in Indonesia by using national representative household survey data.

We found a prevalence of youth NEET in Indonesia of 23.8%, which implies that almost one in every four individuals aged 15-24 in Indonesia is neither in employment nor in education or training. The estimated NEET rate is equivalent to that carried out by other researchers and international organization reports. The prevalence rates of NEET vary across provinces as each province in Indonesia has different economic,

social, and culture characteristics. West Java tops the list with a NEET rate of 28.8%, while Bali has the lowest prevalence of youth NEET (9.9%). NEET rates also differ between youth residing in urban and rural settings. Overall NEET incidence among urban youth (21.0%) is lower than that of their rural counterparts (26.8%).

Our calculations also show that the prevalence of female youth NEET (33.9%) was twice as high as that of male youth (14.0%). When disaggregated by youth age, NEET rates for men and women follow different pathways. The prevalence of women who are not working, studying or attending training increased significantly since the age of 18, while that of men decreased significantly. At 24 years of age, the prevalence of female youth NEET is 48.9% or nearly 1 in 2 female youth are categorized as NEET. The high level of female youth NEET rates, both in urban (64.3%) and rural (74.4%) areas, is caused by the high number of women who are only taking care of household work without engaging in any work activities (to earn income) or learning (such as taking equivalency education).

Being a woman implies 15.4% more likelihood to become NEET, relative to being a man. The chance of youth becoming NEET increases up to the age of 18; such probability subsequently decreases with age. Obtaining higher education attainment is associated with lower odds of being NEET. Overall, youth completing junior secondary, senior secondary, and tertiary level of education have, respectively, 0.3%, 3.5% and 8.2% less likelihood of being categorized as NEET in comparison to those with up to primary level education. Being ever married among men means 17.1% lower likelihood to become NEET (in comparison to unmarried men), while for women, living in a marriage bond is associated with a 17.7% higher probability of being NEET (relative to unmarried women).

Our estimates show that men aged 15-24 belonging to households headed by females are 2.1% more likely to become NEET, whereas young women coming from female-headed households are 3.4% less likely to neither engage in working nor studying or training. Having family members under 5-year old as well as having elderlies (aged 60+) in the household is correlated with a lower chance of being NEET among men, but a higher likelihood of becoming NEET among women. Household per capita expenditures are negatively associated with the likelihood to become NEET. The richer the household is, the less likely the youth is to be categorized as NEET.

Findings on the new features on the determinants of youth becoming NEET in this article are the following: youth who claimed to attend local meetings has a lower likelihood of being NEET. Likewise, individuals who are actively engaged in religious activities (such as Quran recitation, religious celebrations, religious lectures, etc.) and/or community and social services have a lower likelihood to be NEET, conversely, being actively engaged in sports and other social activities (such as arts, Posyandu/weighing babies activities, etc.) is associated with a higher probability to neither engage in employment nor in education or training.

Watching TV is associated with increased odds of becoming NEET, while reading newspapers/magazines have no effect on being NEET among all individuals. Accessing the Internet coincides with 2.5% less likelihood to be categorized as NEET; the effect is lower among men (0.5%) than women (2.7%). Mastery of reading and writing Latin- and other non-Arabic letters correlates with decreased odds of becoming NEET. However, a higher ability to read and write in Arabic letters is associated with a higher probability to neither engaged in employment nor in education or training.

REFERENCES

- Adioetomo, S.M., H. Posselt, and A. Utomo. 2014. "Youth in Indonesia." *UNFPA Indonesia Monograph Series No. 2*. UNFPA Indonesia: Jakarta.
- Badan Pusat Statistik (BPS). 2015. *Survei Sosial Ekonomi Nasional September 2015: Pedoman Pencacahan Modul Sosial Budaya dan Pendidikan*. Badan Pusat Statistik: Jakarta.
- Badan Pusat Statistik (BPS). 2016. *Statistik Pemuda Indonesia (Hasil Survei Sosial Ekonomi Nasional) 2015*. Badan Pusat Statistik. Jakarta.
- Bird, K. 2018. "Reducing Youth Not in Employment, Education, or Training through JobStart Philippines." *Social Protection Brief*, No. 87, January 2018. Asian Development Bank, Manila.
- Carcillo, S., R. Fernández, S. Königs, and A. Minea. 2015. "NEET Youth in the Aftermath of the Crisis: Challenges and Policies." *OECD Social, Employment and Migration Working Papers*, No. 164, OECD Publishing, Paris. <http://dx.doi.org/10.1787/5js6363503f6-en> (Accessed on 2 December 2018).

- Donado, A. 2014. "Foreign Languages and their Impact on Income and Unemployment." https://www.econstor.eu/bitstream/10419/100288/1/VfS_2014_pid_123.pdf (Accessed on 28 December 2018).
- Elder, S. 2015. "What Does NEETs Mean and Why is the Concept So Easily Misinterpreted." *Technical Brief*, No. 1, January 2015. International Labor Office, Geneva.
- Elisabeth, E. 2015. *The Relationship Between English and Employability in the Middle East and North Africa*. British Council, Manchester.
- Franita, R. 2016. "Analisis Pengangguran di Indonesia." *Jurnal Nusantara*. 1(nomor edisi):halaman.
- Kovrova, I., and S. Lyon. 2013. "NEET youth dynamics in Indonesia and Brazil: A cohort analysis." *Understanding Children's Work (UCW) Working Paper Series*. Rome.
- OECD. 2016. "Investing in Youth: Australia." Investing in Youth. OECD Publishing, Paris, <https://doi.org/10.1787/9789264257498-en> (Accessed on 10 December 2018).
- OECD. 2017. "Investing in Youth: Japan." Investing in Youth. OECD Publishing, Paris, <https://doi.org/10.1787/9789264275898-en> (Accessed on 10 December 2018).
- OECD. 2018. "Youth not in employment, education or training (NEET) (indicator)." doi: 10.1787/72d1033a-en (Accessed on 10 December 2018).
- Pattinasarany, I.R.I. 2018. "Not in Employment, Education or Training (NEET) in Indonesia: Overcoming Social Injustice among Youth." Paper presented at *the 2nd International Conference on Social and Political Issues*, at Sanur, Bali, on October 29th, 2018.
- Population Reference Bureau (PRB). 2017. 2017 World Population Data Sheet with a Special Focus on Youth. Population Reference Bureau. Washington, DC. <https://www.prb.org/2017-world-population-data-sheet/> (Accessed on December 1, 2018).
- Ranzani, M., and F. Rosati. 2018. "The NEET trap: A Dynamic Analysis for Mexico." *Understanding Children's Work (UCW) Working Paper Series*. Rome.
- Salvà-Mut, F., M. Tugores-Ques, and E. Quintana-Murci. 2018. "NEETs in Spain: An Analysis in A Context of Economic Crisis." *International Journal of Lifelong Education* 37(2):168-183. DOI: 10.1080/02601370.2017.1382016.

- SMERU and Sekretariat Nasional Pemberdayaan Perempuan Kepala Keluarga (PEKKA). 2014. "Menguak Keberadaan dan Kehidupan Perempuan Kepala Keluarga." *Laporan Hasil Sistem Pemantauan Kesejahteraan Berbasis Komunitas* (SPKBK-PEKKA). Lembaga Penelitian SMERU dan Sekretariat Nasional PEKKA. Jakarta.
- Sonnenberg, B. 2013. "Unemployment and Social Involvement - Relationships and Mechanisms" in *Dependencies and Mechanisms of Unemployment and Social Involvement, Findings from the Socio Economic Panel Study* (SOEP). Springer VS, Berlin, Germany.
- United Nations (UN). 2018. "Youth and the 2030 Agenda for Sustainable Development." *World Youth Report*. United Nations Publications. New York.
- Wooldridge, J.M. 2002. *Introductory Econometrics: A Modern Approach*. 2nd ed. Thomson/South-Western. Mason, Ohio.
- World Bank. 2014. *Analisis Keuangan Publik Sulawesi Tenggara 2014: Memelihara Momentum Pertumbuhan Tinggi, Berkelanjutan, dan Inklusif di Sulawesi Tenggara melalui Pembangunan Sektor Pertanian dan Infrastruktur*. World Bank: Jakarta.
- World Bank. 2018. *Poverty and Shared Prosperity 2018: Piecing Together the Poverty Puzzle*. World Bank, Washington, DC.
- Yusup, P.M., E. Kuswarno, and N. Kurniasih. 2017. "Aspek Keterbatasan Akses Informasi Penghidupan Orang Miskin Pedesaan." *Masyarakat, Kebudayaan dan Politik* 30(1):34-47.