ANALYSIS OF LABOR MARKET DYNAMICS IN INDONESIA (1986-2022)

Thomson Sitompul
Universitas Pelita Harapan
thomson.sitompul@uph.edu

ABSTRACT
The researcher provides new evidence from Badan Pusat Statistik and International Labor Organization data on how labor market dynamics vary in labor market in Indonesia based on the ILO publication, 17 Key Indicators of the Labor Market 2015, which shows statistics on the main indicators in the dynamics of the labor market. Result shows that In Indonesia, the LFPR (Labor Force Participation Rate) for young people (15-19) is relatively low and reaches a peak among men (20-29) and then begins to decline substantially for older people (60+). Japan, as a developed country that is still in the Asian region, has a 2017 LFPR of 60.21%, this is because LFPR is the percentage of the labor force to the working age population. The total population of Indonesia aged 15 years and over is higher than Japan. In Indonesia, based on the number of people working in the sector, for the period 1986 to 2016, the agricultural sector is the most volatile sector. The highest proportion of informal employment in the non-agricultural sector is experienced by those with low education and the lowest is experienced by university graduates. Compared to Laos, Thailand and Cambodia as neighboring countries and developing countries, Indonesia is the country with the highest unemployment rate. Over the period 1991 to 2017, youth unemployment rates increased sharply for both men and women. The characteristics of unemployment in Indonesia based on unemployment show that the unemployed with high education (ILO concept: Intermediate and Advanced) are higher than the unemployed with low education (basic education).

Keywords: KLIM, LFPR, Unemployment, Economic Sector.

INTRODUCTION
The labor market in Indonesia is currently experiencing significant transformations. These changes carry significant implications for disadvantaged and at-risk populations, as they result in a higher number of individuals who are excluded from the labor market. Consequently, it becomes more challenging to reintegrate those who were already on the fringes of...
society. This presents a substantial hurdle for Indonesia. The primary shifts occurring in the labor market include: Escalating instability, precarious work conditions, and increased uncertainty. A rise in unemployment, including among young individuals and those with the highest qualifications. Technological advancements shaping the job market. A growing population of working individuals who are struggling with poverty.

The following labor market dynamics are analyzed based on the ILO publication, 17 Key Indicators of the Labor Market (KILM) 2015, which shows statistics on the main indicators in the dynamics of the labor market in Indonesia, other developing countries and developed countries as selected countries which consists of analysis of the dynamics of the labor force participation rate, the working population ratio with total population, labor market by sector, informal employment, total TPT, TPT by education, disguised unemployment, youth unemployment, and NETT is also presented. KILM can present trends in the job market which refer to issues related to macroeconomic indicators in economic development issues.

**Literature Review**

![Cobweb Model: Labor Market Dynamics per Generation](image)

**Figure 1. Cobweb Model: Labor Market Dynamics per Generation**

From the graph above, initially the entry level labor market is at the equilibrium point where S crosses D so that new engineer graduates in generation X are created equal to E0 at the entry wage level W0. Suppose there is an increase in demand for newly trained engineering graduates as a result of the dynamics of the engineering job market due to the US government's human race policy which reached the end of the 60s so that the demand curve for fresh graduate engineers increases and shifts to D' and companies will expand their workforce to rate E* at wage rate W*. Companies certainly find it difficult to recruit engineers quickly because they have to be trained again by the company so it takes a long time to hire them (so it is perfectly inelastic). Because educational institutions can only produce E0 engineers each year, the short-run supply curve becomes perfectly inelastic at a hiring rate of E0 workers. The combination of the inelastic supply curve (vertical line along E0) and this shift in demand (D to D') increases the engineer's entry wage to W1.

When this dynamic occurs in the engineering job market, prospective students and students from the Y cohort and generation will decide whether to major in engineering or not. They will consider the relatively high wages currently in the engineering job market to encourage them to enter engineering education. After they graduate, as many as E1 new engineers are in School to Work Transition status who enter the job market in the engineering world where the supply of engineering labor is very inelastic at the hiring rate of E1 so that the dynamic situation of the labor market occurs on the inelastic supply curve and the demand D' assuming demand conditions do not change much. Equilibrium also occurs at the W2 wage level, which is far below the reservation wage for new engineers when they decide to take engineering majors where their expectations are at the W2 wage.
level. Therefore, what is happening in the dynamics of the engineering world job market is an excess of engineer graduates.

The next generation, namely Z, will also try to decide whether to become a technician or not based on the current conditions of the engineering job market. The current dynamic is low wages, namely at W2, which makes them not interested in taking engineering majors, so not many are interested in this major. It can be seen from the curve that only E2 is the engineer workforce who is willing to work for a wage of W2. When generation Z students graduated, wages rose to W3 because there were few engineers at that time.

**METHODOLOGY**

This study uses descriptive analysis methods from secondary data and existing publications. The secondary data used comes from the Central Statistics Agency, and ILO. This study also uses sources from books, journals, scientific articles, newspapers and websites related to youth and employment.

**Result and Discussion**

**Labor Force Participation Rate Dynamic**

FLPR for young people (15-19) is relatively low and reaches a peak among men (20-29) and then begins to decline substantially for older people (60+). Figure 2 shows the FLPR trend based on the age structure of the Indonesian population from 1998 to 2022. The 30-34 year age group has the highest FLPR (78.99% in 2014). The FLPR pattern for all age groups did not experience significant changes from 1998 to 2022, except for FLPR aged 15-19 years which decreased quite sharply (13.36%) between 1998 (41.41%) and 2022 (28.05%).

**FLPR in Several Countries**

In figure 3, Thailand as a developing country, like Indonesia, recorded a higher FLPR compared to Indonesia from 1990 to 2017. It was recorded at 68% for Thailand, 66.28% for Indonesia. This is because women working has shown an increase. The FLPR of women in Thailand is higher than the FLPR of Indonesian women (data not shown in the article but available on worldbank). Japan, as a developed country that is still in the Asian region, has a 2017 FLPR of 60.21%, this is because FLPR is the percentage of the labor force to the working age population. The total population of Indonesia aged 15 years and over is higher than Japan.

**Employment-To-Population Ratio Dynamic**

Employment-to-population ratio describes the proportion of the working age population (15+) who have participated productively in producing
goods and services in the labor market. A high ratio indicates an increasingly productive population. A lower ratio indicates a high proportion of the population who actually has potential but is not involved in productive labor market activities.

**Figure 3. KILM 2. Employment-To-Population Ratio Dynamic**

**Labor Dynamics by Sector**

The three sectors used in KILM3 are agriculture, industry, services and trade. The process of economic development is marked by a shift from the agricultural sector to the industrial sector. In Indonesia, the agricultural sector is the most dominant sector in the economic structure as in other developing countries. Based on the number of people working in the sector, for the period 1986 to 2016, the agricultural sector was the most volatile sector compared to the other three sectors. The trade sector showed an increase in labor absorption from 1986 to 2016. The industrial sector moved up until 2016 except for a decline in 2006. The service sector shows fluctuations in labor absorption in this sector.

**Figure 4. KILM4: Labor Dynamics by Sector**

**Proportion of Informal Employment in the Non-Agricultural Sector According to Education Level**

The graph informs that the highest proportion of informal employment in the non-agricultural sector is experienced by those with low education (SD) and the lowest is experienced by university graduates. Data for 2015 – 2017 shows that the lower the education, the higher the proportion of them forming informal jobs in the non-agricultural sector. The imbalance in the labor market in the form of increasing supply growth and limited demand for labor has resulted in an increasingly high labor surplus in Indonesia, resulting in the creation of an informal sector such as the phenomenon of the proliferation of content creators on social media in Indonesia, which indicates an informal sector that can be used as a source of income.

**Figure 5. KILM4: Proportion of Informal Employment in the Non-Agricultural Sector According to Education Level**

**Dynamics Of Open Unemployment Rates**

Indonesia's TPT (unemployment rate) from 1991 to 2017 reached its peak in 2007 then decreased until 2014 and rose again in 2015 and fell in 2017. Compared to Laos, Thailand and Cambodia as neighboring countries and developing countries, Indonesia is the
country with the highest unemployment rate. The ILO notes that these three countries are among the countries with the lowest TPT in the world. A low TPT does not mean the country has a strong economy. Laos, 0.67% in 2017 but its GDP per capita was only $1,642. Cambodia (2016) recorded 0.22% while GDP per capita was $1,269 (worldbank). These countries have low TPT because their economic structure is supported by agriculture with intensive labor absorption in this sector.

However, Qatar can show low TPT criteria and is one of the rich countries in the world with potential economic power. Qatar's economy is supported by oil and natural gas, thus encouraging diversification of employment in the labor market through the financial services, manufacturing, construction and newspaper media sectors.

![Figure 6. KILM5: Dynamics Of Open Unemployment Rates](image)

**Dynamics Of Young Unemployment**

Over the period 1991 to 2017, youth unemployment rates increased sharply for both men and women. Youth unemployment as a percentage of the total youth workforce showed a decline after 2005 to 15.63% for women and 15.32% for men in 2017 after increasing from 1999 to 2005 which reached 29.82 for women and 21.70 for men in 20105. Compared with developed countries (Japan), Indonesia's youth unemployment is relatively high. Japan recorded a youth unemployment rate of only 4.60% in 2017, which since 2011 has shown a decline.

![Figure 7. KILM6: Dynamics Of Young Unemployment](image)

**Dynamics Of Unemployment According To Education**

The characteristics of unemployment in Indonesia based on education show that unemployment with higher education (ILO concept: Intermediate and Advanced) is higher than unemployment with low education (basic education) since 1999 until the current period there has been no change in this dynamic. One of the reasons why unemployed people have upper middle school to tertiary education is the high reservation wage set by them (Priyono, 2015).

Unemployment based on education in Finland as a country with good quality education is interesting to compare with Indonesia. Indonesia's conditions contrast with Finland. Finland's low-educated unemployed were higher compared to upper-middle educated unemployed throughout the period 1999 to 2017. The support of Finland's economic and educational structures shows the harmony of the function of education in the dynamics of the Finnish labor market.
Half Unemployment Rate By Age Group

Underemployment indicates low wages and a lack of desired working hours. Working hours are a benchmark for disguised unemployment. From 2015 to 2017, the highest disguised unemployment occurred among young workers (15-19). The higher the age of the worker, the lower the level of disguised unemployment. The ILO notes that disguised unemployment categorizes workers who work less than 30 hours per week and who wish to look for additional work. A high underemployment rate indicates a country's failure to provide full time jobs (ILO).

Conclusion

In Indonesia, the LFPR (Labor Force Participation Rate) for young people (15-19) is relatively low and reaches a peak among men (20-29) and then begins to decline substantially for older people (60+). Japan, as a developed country that is still in the Asian region, has a 2017 LFPR of 60.21%, this is because LFPR is the percentage of the labor force to the working age population. The total population of Indonesia aged 15 years and over is higher than Japan. In Indonesia, based on the number of people working in the sector, for the period 1986 to 2016, the agricultural sector is the most volatile sector. The highest proportion of informal employment in the non-agricultural sector is experienced by those with low education and the lowest is experienced by university graduates. Compared to Laos, Thailand and Cambodia as neighboring countries and developing countries, Indonesia is the country with the highest unemployment rate. Over the period 1991 to 2017, youth unemployment rates World Bank recorded that NETT in Indonesia was quite high compared to Thailand as a fellow neighboring and developing country. When compared with Thailand and Indonesia, the United States' NETT is not higher than Indonesia but higher than Thailand. High unemployment in the United States is in line with increasing US NETT.
increased sharply for both men and women. The characteristics of unemployment in Indonesia based on unemployment show that the unemployed with high education (ILO concept: Intermediate and Advanced) are higher than the unemployed with low education (basic education).

REFERENCES
ILO. (2015). What does NEETs mean and why is the concept so easily misinterpreted?, (1).