

Original Article

A Comparison of Long-Term Unemployment before and after the Pandemic Covid-19 : Literature Review Analysis

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Abstract: *The unemployment rate has risen dramatically in Indonesia due to the COVID-19 pandemic. Unemployment is an economic problem that will always be faced by every country in the world, both underdeveloped countries, developed countries, and developing countries like Indonesia. The highest open unemployment rate in Indonesia is attributed to the graduates of vocational schools. The workers who graduate from vocational schools possess only one particular skill, which makes it difficult for them to enter the job market, whose demand for those skills is not in line with their educational background and requires a longer time to find the right position. According to the job search theory, the workforce whose paradigm of high unemployment duration is only owned by workers with established economic and social conditions changed after the COVID-19 pandemic, where all workers were forced to have a high unemployment duration after completing their study period. The COVID-19 pandemic that occurred in all countries in the world has had an impact on changing the paradigm of the duration of unemployment experienced by the workforce.*

Keywords: *Unemployment, Pandemic COVID-19, Looking for Work.*

I. INTRODUCTION

During 2019, the Covid-19 pandemic had a significant impact on the capabilities of people throughout the world. During the Covid-19 pandemic period, the unemployment rate increased dramatically due to the layoffs. According to Mankiw et al. (2012), unemployment is a macroeconomic issue that directly impacts humans. It is a significant issue as it will result in a decline in living standards and psychological stress for the workforce. Due to the Covid-19 pandemic, the community's ability to choose consumer goods is very limited. This has had a negative impact on sustainable economic development at both the micro and macro levels.

The issue of unemployment is an economic issue that will continue to confront every nation in the world, encompassing underdeveloped nations, developed nations, and developing nations such as Indonesia. Bernstein & Juozaityene, (2011) explains that the level of the labor market reflects the economic situation of a country and can show its weaknesses, one of which is unemployment. The unemployment phenomenon is caused by an imbalance between demand for labor and the country's ability to absorb labor. The ability of the workforce to obtain the appropriate education required by the job market has an impact on the ability of the workforce to get a job. Long-term unemployment has been shown to have potentially frightening effects that can have harmful impacts later in life, especially for young people who belong to those in society who are not in education, employment, or training. The open unemployment rate based on education level for the 2015-2022 period can be seen in Figure 1.

A vocational high school is a level of education that prepares workers with both soft and hard skills to be immediately absorbed into the job market. According to Figure 1.1, the workforce graduating from vocational schools contributes to Indonesia's highest open unemployment rate for 2015-2022. During this period, the open unemployment rate for vocational school graduates was 13.55 percent. This phenomenon is due to the fact that workers who graduate from vocational schools are only equipped with one special skill, which makes it difficult for them to be absorbed into the job market when the demand for job market skills does not match their educational background. The discrepancy between educational attainment and employment arises due to the inconsistency between workers' skills and employment prospects, as stated by Hoturu et al. in the year 2022. The disparity between education and employment significantly impacts the duration of unemployment for individuals seeking employment that aligns with their educational background.

A government policy is a very important factor in controlling open unemployment, a macroeconomic problem in a country. The long-term unemployed not only lose their skills, they also lose motivation and fall ill. In economic terms, this is called the depreciation of human capital. The government is expected to be able to reduce open unemployment by using both fiscal and monetary policies, one of which is by increasing government spending in the labor market system with the aim of creating a condition where the workforce can work.

The tourism sector is the leading sector of Bali Province in terms of achieving economic development. In order to achieve economic development, the tourism industry will encourage changes to the structure of economic conditions in the Province of Bali itself. The escalating rate of unemployment in 2020 was attributable to the Covid-19 pandemic that



occurred in 2019. The Covid-19 pandemic necessitated companies to adopt drastic measures, including reducing the number of workers or employees, resulting in job losses (Sabran et al., 2023) The government's policies, which restrict individuals' social and economic pursuits, have had a detrimental impact on the extremely high Open Unemployment Rate percentage in 2020, resulting in a recovery period following the Pandemic Covid-19, but it has not yet reached the level prior to the Pandemic Covid-19.

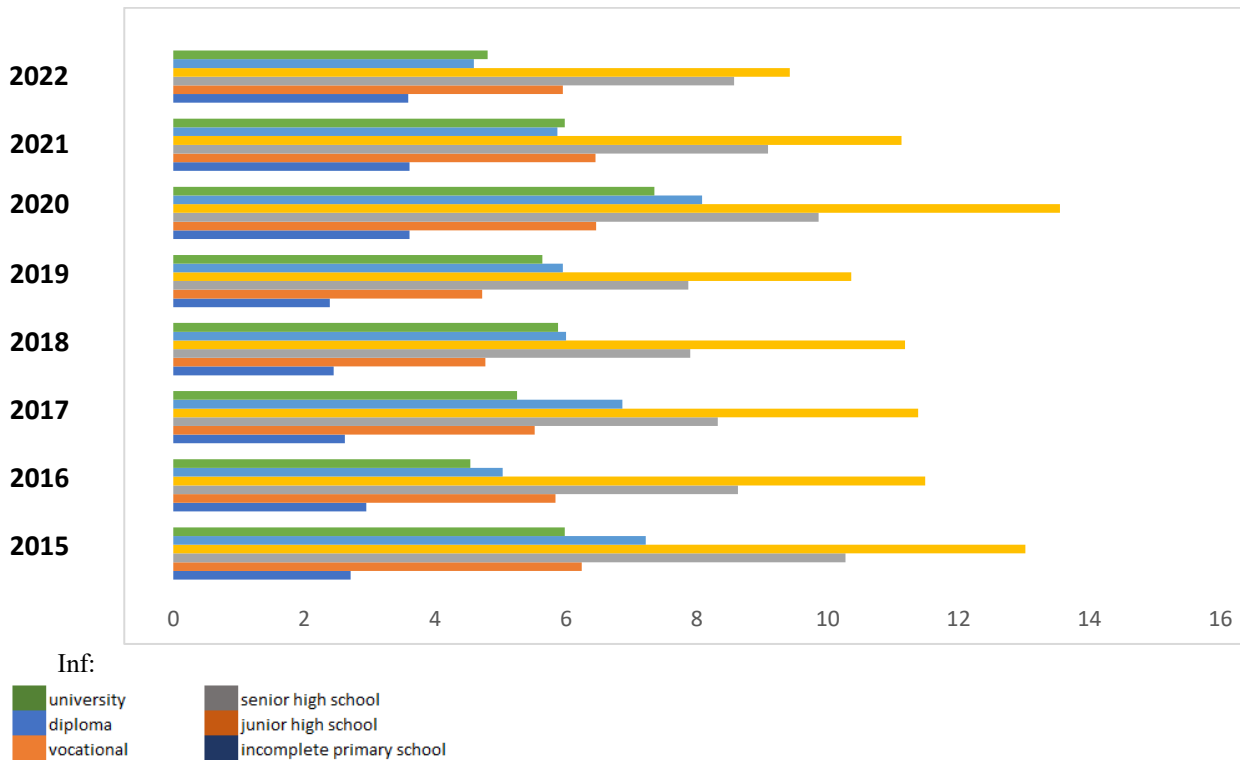


Figure 1: Open Unemployment Rate Based on Education Level 2015-2022 Period (percent)

II. LITERATURE REVIEW

A. Job Search Theory

The concept of job search theory examines the phenomenon of unemployment from the standpoint of labor supply, which involves workers' decisions to enter the job market based on specific characteristics. Todaro (2006) states that individual decisions to increase or decrease their free time are influenced by wage levels and non-work incomes. The labor supply includes the number of people who are ready to work or who are currently working, as well as the quality of the workforce and the jobs offered. The information received by workers on the job market is incomplete. Information regarding the level of wages received by workers from a company, as well as the criteria required by companies when recruiting workers. The impact of this imperfect information on the duration of unemployment of workers is that they are unable to find a job as quickly as possible.

The job search theory is based on the assumption that individuals actively seeking employment will adopt a risk-neutral attitude. Risk neutrality is a state wherein a worker makes a decision regarding the acceptance or rejection of a job that is contingent upon the anticipated net income and reservation wage. Workers who are faced with these considerations in the process of securing employment will be compelled to suspend their search for employment in order to prevent further losses that the workforce may feel. Danim (2003) discusses the factors that influence labor supply, including:

1. The first factor to consider is the wage level. The primary motivator for individuals to engage in work is the payment of wages. The higher the wage level, the more time you will be offered to work.
2. The preferences. The steeper the indifference curve, the weaker the role of income in compensating for reduced leisure time due to the need to earn income.
3. The general structure of the organization. The Indonesian population is incorporated into the young age structure, as evidenced by the pyramidal shape of the Indonesian population. Although population growth can be suppressed, the labor supply will increase because more and more people are entering working age. Therefore, the supply of labor will also increase.
4. The fourth factor is the population. The number of people employed depends on the population.
5. The education level. Humans with high education will of course have more skills than people with low education. This is because the higher a person's level of education, the greater the opportunity to get labor offers.
6. Participation in the labor force With a high labor force participation rate, there is a greater supply of labor.

7. The unemployment rate is a significant factor. The discourage worker hypothesis posits that in the event of a worsening economic situation, there will be an increase in unemployment as individuals become more desperate in their search for employment and will depart from the labor market. However, the additional worker hypothesis states that if finding work becomes more difficult, other family members will be forced to look for work.
8. Physical wealth is important. Physical wealth has the potential to have both positive and negative consequences. If physical wealth requires it, it will force people to work, which will have a positive impact, whereas if it is income-generating, it will have a negative impact.
9. The economic structure is important. The shift from the agricultural sector to manufacturing and services will bring about changes in income and employment opportunities, affecting the labor force participation level.

B. Decision Theory

A person or workforce usually makes a decision based on certain conditions, and will choose conditions that provide maximum benefits for the person or workforce. Desmita (2008) reveal that decision-making is a form of thinking, and the outcome of that action is referred to as a decision. Decision making is a process of selecting various alternatives and then choosing one of the alternatives to achieve the desired thing. Decision making is based on considering various factors, both objective and subjective. A person's decision-making process will have a significant impact on all their activities, including economic ones. Decision-making is made based on personal considerations or the conditions experienced by a person. According to Suharnan, decision making is the process of selecting or determining various possibilities among uncertain situations. It is an alternative for a worker to decide to work immediately after completing the study period. The field of decision theory can be categorized into four distinct categories, namely:

1. Decision making under conditions of certainty. In this case, the decision maker knows with certainty the consequences or results of each decision alternative chosen.
2. Decision making under risk. The decision maker knows the possibility (probability) that an event will occur or the consequences of each choice.
3. Decision making under uncertainty. The decision maker does not know the probability that an event will occur for each alternative.
4. Hierarchical decision making. Decision making using hierarchy here is based on priorities, where prioritization contains three principles: the principle of establishing a hierarchy, the principle of setting priorities and the principle of logical consistency.

The decision to work immediately will shorten the duration of unemployment for workers and positively impact the economic conditions of the family and the country. Making decisions with various conditions workers face so that they force workers to immediately get a job is one of the decisions made due to conditions of uncertainty.

C. Unemployment Theory

Unemployment is a macroeconomic issue that affects all nations worldwide, including emerging economies such as Indonesia. Unemployment is a condition in which individuals have completed their academic pursuits and are seeking employment, but have not yet been able to secure a suitable position. The problem of unemployment will have a universal impact on improving the quality of life, and this can also impact the economic growth of a region or even a country. Indonesia, as a developing country, has a characteristic unemployment problem, namely a high number of educated unemployed people. A very high population is accompanied by an abundance of human resources, which has great potential to pursue national development. However, the very large number of human resources is accompanied by a high number of educated unemployment.

Unemployment is often associated with psychological health and other problems, which have a significant negative effect on quality of life. It also generates additional long-term costs for the health care system and welfare services. Even though a person is actively looking for a job, he or she is not considered to be unemployed. According to Nanga (2005), unemployment can be classified into several distinct categories, including:

1. Frictional or Transitional Unemployment. Frictional unemployment is a type of unemployment that **occurs** as a result of changes in work conditions, which occur in line with current economic developments or dynamics.
2. Structural unemployment. The term structural unemployment refers to the type of unemployment that arises as a result of modifications in the structure of the labor market, resulting in a discrepancy between the supply and demand for labor.
3. The natural unemployment rate refers to the unemployment rate that occurs at full employment or the unemployment rate where the anticipated inflation rate is identical to the actual inflation rate.
4. Cyclical or Conjuncture Unemployment is a type of unemployment that occurs as a result of a decline in economic activity or too little aggregate effective demand in the economy compared to aggregate supply (US).
5. The impacts that can be caused by high levels of unemployment can be felt at all levels of society. The unemployment rate is a measure of unemployment in a country, where the total unemployment in a country can be expressed as a percentage of the total workforce (labor force).

D. Research Methods

This study employs the Literature Review methodology, which aims to identify, evaluate, and assess all pertinent research in order to determine the answers to research inquiries (Triandini et al., 2019) This research went through several stages, including formulating the problem in the research, searching for related literature, selecting the literature used, and processing and presenting the data until drawing the final conclusions of the research.

The literature review used in this research is a type of descriptive research, which is appropriate to the research topic and research objectives. The phenomenological approach is an interpretive study that follows facts about human experience, with the aim of understanding and describing situations, events, and experiences as something that appears and is present every day. The field of phenomenological research focuses on the study of the latest phenomena, encompassing the occurrence of events related to a phenomenon, and their impact on a specific group of individuals. Conversely, descriptive research is a type of research that amalgamates the findings of previous research and presents them in a research report (also known as a literature review) The purpose of this research observation is to examine the duration of unemployment among workers before and after the Covid-19 pandemic. The twelve journals reviewed in this research discuss the duration of unemployment before and after the Pandemic Covid-19.

Table 1: Research Methods and Results

No	Researcher / Year	Research Title	Research Methods	Research Result
1	Fitriani Aditya Putri (Seminar Nasional Official Statistics) / 2021	Pengaruh Human Capital terhadap Durasi Menganggur pada Pekerja yang Terkena PHK Akibat Pandemi Covid-19	Analisis Survival <i>Proportional Hazard Model</i> atau <i>Regresi Cox</i>	The workforce that has been impacted by the Covid-19 pandemic is dominated by individuals who have completed high school, vocational school, or equivalent education, but have not participated in training (both certified training and Pre-Employment Card program training). They are male, aged 31.51 years, reside in urban areas, and are married. The workforce that has been laid off due to the Covid-19 pandemic and possesses an education level equivalent to that of a high school or vocational school has a lower likelihood of resigning from employment than those who have not attended school or have not completed elementary school
2	Faisal Siddiq dan Mohammad Dokhi (Jurnal Statistika dan Aplikasinya) / 2022	Survival Analisis Durasi Menganggur Angkatan Kerja Disabilitas yang Mengalami Berhenti Bekerja Akibat Pandemi Covid-19	Survival Analisis Accelerated Failure Time (AFT)	The workforce comprised of individuals with disabilities who have ceased employment due to the Covid-19 pandemic, with a significant proportion of re-employment. This group comprises individuals with disabilities who possess the highest level of education, but who have not attended school or completed elementary school, have not undergone certified training, are female, possess the status of head of household, reside in a rural area, and have ceased employment due to the loss of employment.
3	Donna S. Rothstein (Monthly Labor Review) / 2016	An Analysis of Long-term Unemployment	Descriptive Analysis	Black men, individuals with lower levels of education, and individuals with lower cognitive test scores were more likely to experience their initial period of long-term unemployment during a particular month. Black men exhibit a lower likelihood of being rehired following a prolonged employment period compared to non-Hispanic black men.
4	Hiroaki Miyamoto and Nujin Suphaphiphat (IZA Journal of Labor Policy) / 2021	Mitigating Long-term Unemployment in Europe	Panel Regression Model	The ALMP plays an important role in reducing LTU, but its effectiveness varies between programs. We find that, in line with existing literature, startup training, and incentive programs are effective tools to mitigate LTU. To reduce the incidence of LTU, it is important to ensure adequate spending on effective ALMPs, address skills mismatches, and promote labor market matching efficiency.

5	Muhamad Fathul Muin (Jurnal Perspektif Ekonomi Darussalam) / 2020	Analysis of Determinants of Unemployment Rate in Indonesia	Panel Regression Analysis	The unemployment rate can be reduced by increasing the average number of years of schooling. Meanwhile, economic growth and population competence in the field of information technology do not have a significant effect on reducing the number of unemployed in Indonesia.
6	Nazaruddin Malik, Muhammad Sri Wahyudi Suliswanto dan Mochamad Rofik (Jurnal Ilmu Sosial dan Ilmu Politik) / 2021	The Unemployment Rate Amid the COVID-19 Pandemic: Propose the Best Practices Policy to Maintain Labor Market Stability	Quantitative Analysis Granger Causality Test	Avoiding workforce mismatches after a recession is also a problem that increases unemployment. These findings could be a basis for the government to improve the employment system by involving industry and educational institutions. For the national employment system, Social security programs in the midst of a pandemic need to be given attention. Also, being resilient after the pandemic, which every country needs.
7	Austin Nichols, Josh Mitchell, and Stephan Lindner (The Urban Institute) / 2013	Consequences of Long-Term Unemployment	Descriptive Analysis	Losing a job as a parent hinders children's educational progress and reduces their future earnings. The association between longer duration of unemployment and worse consequences will be weaker. Lower wages and lifetime earnings are associated with longer periods of unemployment, but the reasons for the decline in earnings prospects are unclear. While there is a pattern of decreasing welfare due to prolonged unemployment, it is not yet clear to what extent the decline in welfare is caused by loss of lifetime income or due to not working.
8	Christelle Garrouste, Kornelia Kozovska and Elena Arjona Perez (European Commission Joint Research Centre Institute for the Protection and Security of the Citizen) / 2010	Education and Long-Term Unemployment	Skewed Logistic Regression (model logit biner dan biner model Scobit)	The likelihood that a person will be in long-term unemployment decreases with their level of education. There is a decline in returns to education after age 40, which confirms the skill obsolescence assumption maintained in the human capital literature. With regard to regional settings, younger workers (20-30) and older workers (50-65) tend to benefit more from the dynamics offered by highly competitive regions.
9	Kory Kroft, Fabian Lange, Matthew J. Notowidigdo, and Lawrence F. Katz (Nber Working Paper Series National Bureau Of Economic Research) / 2014	Long-Term Unemployment and the Great Recession: The Role of Composition, Duration Dependence, and Non-Participation	The Model Calibration	Compositional shifts in demographics, employment, industry, region, and reasons for unemployment together account for very little of the observed increase in LTU. This study calibrates a matching model that allows for duration dependence on exit rates from unemployment and transitions between employment (E), unemployment (U), and non-participation (N).
10	Predrag Bejaković and Željko Mrnjavac (Economic Research-Ekonomska Istraživanja) / 2019	The danger of long-term unemployment and measures for its reduction: the case of Croatia	Descriptive Analysis	The problems experienced by the long-term unemployed are largely multidimensional, and often include low levels of educational attainment and motivation. Relatively high real wages, institutional rigidities and widespread skills gaps appear to be the main obstacles to more dynamic labor market performance. Prolonged unemployment, particularly for young people, may have long-term impacts on future employment and wages. This can lead to withdrawal from the labor market, which in turn reduces labor force participation.

11	Rusman (Proceeding Seminar Nasional & Call For Papers Universitas Muhammadiyah Mamuju Sulawesi Barat) / 2021	Dampak Pandemi Covid-19 Terhadap Angka Pengangguran Di Indonesia	Literature Study	The decline in economic growth during the Pandemic Covid-19 in 2020 resulted in companies laying off workers and currently unemployment is soaring. Judging from the expenditure side, the Goods - Services Export Component experienced the highest growth of 31.78 percent. In the third quarter - 2021, the Indonesian economy experienced growth of 3.24 percent and in terms of expenditure all components grew, the highest growth occurred in the Export Component of Goods and Services at 22.23 percent.
12	Alexander Spermann (IZA Journal of Labor Policy) / 2015	How to fight long-term unemployment: lessons from Germany	Descriptive Analysis	The number of long-term unemployed in Germany has stagnated at around one million for several years. Despite excellent labor market conditions, the long-term unemployment rate is well above the OECD average. An important element is an activation strategy for the long-term unemployed and long-term basic income recipients which implies temporary target settings and requires more and better trained case managers in employment centers.

III. RESULTS AND DISCUSSION

The capacity of a nation to absorb labor in the labor market is a crucial metric for evaluating its economic progress. The duration of unemployment refers to the period of time during which individuals have completed their academic pursuits and are presently seeking employment. Workers in Indonesia who experience a prolonged period of unemployment are those who possess favorable economic and social circumstances, as they are not eligible for unemployment benefits. Having a long duration of unemployment is an expensive item that only certain groups should have.

The Pandemic Covid-19, which occurred in all countries in the world, has had an impact on changing the paradigm of the duration of unemployment experienced by the workforce. Miyamoto and Suphaphiphat (2021) elucidate that the Pandemic Covid-19 and its restrictive policies have resulted in a significant reduction in activity, resulting in underemployment and unemployment, particularly among low-skilled workers who are unable to work remotely. After the Pandemic Covid-19, all workers were forced to have a high unemployment duration after completing their studies, the paradigm of high unemployment duration, which only belongs to workers with established economic and social conditions, changed. The consequence of workers experiencing a prolonged period of unemployment is that they will lose the chance and abilities to fully realize their lives, and may experience feelings of unappreciation from others. This is due to the societal paradigm that assumes that individuals are only valued if they work and are capable of meeting their own needs.

IV. CONCLUSION

The literature used in research discusses the conditions of unemployment duration for workers before and after the Pandemic Covid-19. The level of education that produces the highest open unemployment rate during the 2015-2022 period is vocational high school graduates. This is because vocational high school graduates only have one skill to enter the job market, so it takes a long time to enter the job market. Covid-19, a pandemic experienced by all countries, has created a new workforce with the condition that high duration of unemployment is not only experienced by groups of people with established economic conditions, but is experienced by the majority of the population who have just entered the workforce. After 2020, the open unemployment rate has decreased and is gradually being controlled. The reduction in the unemployment rate is the result of government policies that have received a positive response in an effort to improve regional economic conditions.

A. Appendix

Table 2: Open Unemployment Rate Based on Education Level 2015-2022 Period (percent)

Level of Education	Open Unemployment Rate Based on Education Level							
	2015	2016	2017	2018	2019	2020	2021	2022
Incomplete Primary School	2,71	2,95	2,62	2,45	2,39	3,61	3,61	3,59
Junior High School	6,24	5,84	5,52	4,77	4,72	6,46	6,45	5,95
Senior High School	10,27	8,63	8,32	7,9	7,87	9,86	9,09	8,57
Vocational	13,02	11,49	11,38	11,18	10,36	13,55	11,13	9,42
Diploma	7,22	5,03	6,86	6	5,95	8,08	5,87	4,59
University	5,98	4,54	5,25	5,88	5,64	7,35	5,98	4,8

Source : Badan Pusat Statistik Indonesia, 2022

B. Interest Conflict

The authors affirm that there is no conflict of interest regarding the publication of this paper. The author examines the duration of unemployment among workers prior to and subsequent to the Covid-19 pandemic. It is hoped that the outcomes of this investigation will provide valuable insights and consideration to the government in determining policy measures in the macroeconomic domain pertaining to measures that can be implemented by the government to mitigate the rate of labor unemployment.

C. Funding Statement

The funding for this research was carried out independently, so that the author has no interests in parties outside of the research. It is anticipated that this research will furnish novel citations pertaining to the advancement of science in general, as well as diverse findings in the domain of unemployment duration.

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