

The Effects of COVID-19 on Unemployment in Realising Sustainable Development Goals: Evidence from Malaysia*

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Abstract

The coronavirus (COVID-19) pandemic poses disastrous effects on human lives and hinders global efforts to realize the Sustainable Development Goals (SDGs) by 2030. The study examined the effects of the pandemic on unemployment toward realizing the SDGs. The downsizing and collapse of businesses have forcibly left many unfortunate Malaysians jobless and without income. The situation may directly influence government efforts to achieve SDG 8 'Decent work and economic growth', which indirectly affects SDG 1 'No poverty', SDG 2 'Zero hunger', and SDG 3 'Good health and well-being'. Pre-and post-pandemic assessments on unemployment and retrenchment level by sector were performed by adopting observation and data comparison methods. Critical findings revealed that the unemployment rate has risen among males and females and the youth, as well as the number of retrenchments. The services sector, specifically the wholesale, retail, trade, and hotel industry showed the highest number of retrenchments. Some important unemployment issues were also covered in this study, including the demand for employment, the role of government and business, and the effect of the gig economy on the current employment landscape. The avenue for future studies can focus on additional societal effects that could prevent the country from attaining the SDGs by 2030.

Keywords: Unemployment, COVID-19, Sustainable Development Goals, Retrenchment, Gig Economy

JEL Classification Code: I3, J1, J6, P2, R2

1. Introduction

The COVID-19 pandemic continues to be a severe concern in the global labor market. The situation has

impacted the global employment landscape due to worldwide shutdowns (Kamarudin et al., 2021). The initial wave of job losses has been massive, and the current situation still imposes high uncertainties on the future job market (Nguyen et al., 2020). The United Nations (UN) (2021) asserted that the economic downturn resulting from the pandemic contributed to over 200 million global unemployment in 2022, which significantly affected women and youth workers. Furthermore, the International Labour Organization (ILO) (2021) reported a global job shortfall of approximately 144 million in 2020, 75 million in 2021, and 23 million in 2022 which was mostly triggered by the pandemic. The shortfall is due to actual employment losses and forgone employment growth.

Current global unemployment issues exert considerable challenges for the countries to realize the Sustainable Development Agenda. In 2015, The UN introduced the 2030 Agenda for Sustainable Development, approved by all UN member countries, which outlines the blueprint for the people and the universe to enjoy more peaceful and prosperous living. The agenda contains 17 SDGs that call for actions by member countries to end poverty and other deprivations,

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which must tally with strategies that can enhance health and education and spur equality and economic growth without compromising climate change, oceans, and forests (UN, 2015). Nevertheless, as the world has been living with the pandemic for over two years, the impact may hinder the efforts to realize the Sustainable Development Agenda by 2030. The issue of unemployment, wage losses, and reduction influence the government's goal to achieve SDG 8, 'Decent work and economic growth,' which indirectly affects SDG 1, 'No poverty,' SDG 2, 'Zero Hunger,' and SDG 3, 'Good health and well-being.'

Although unemployment is a worldwide concern during the pandemic, assessing the severity of the issue from the local perspective is critical. Malaysia has undergone the Movement Control Order (MCO) for two years, which prevents large gatherings, restricts interstate and international travel, and reduces working hours for specific sectors. The restrictions pose socio-economic impacts that lead to joblessness or income reduction (Kamarudin et al., 2021). The study analyzed the unemployment level in Malaysia following the pandemic among people, including males, females, and youth. Furthermore, an in-depth analysis was conducted to examine the retrenchment level based on the industry sector during this period. The outcome is crucial to provide insights into which industries were positively or negatively affected by the pandemic and the employment opportunities. The study also contributed to risk management preparation and national human resource planning, specifically when a country encounters disaster or constraint.

2. Literature Review

2.1. Unemployment During the COVID-19 Pandemic

The COVID-19 pandemic has impacted the employment landscape globally due to the worldwide shutdowns. As a result of the decrease in labor demand and social distancing restrictions to minimize the virus spread, many employers were forced to operate below their productive capacity, including small businesses, such as retailers and cafe operators, and large companies, such as hotel chains. Such scenarios may lead to decreased demand for goods and services as people avoid public places and restaurants and travel less, worsening labor demand. The wave of job losses has been overwhelming and more significant than the impact of the 2007 to 2009 Great Recession. In the United States (U.S.), Blustein et al. (2020) reported that millions filed new unemployment insurance claims despite the lifted stay-at-home restriction. Specifically, job losses in the U.S. based on new claims for unemployment insurance amounted to 25 million from March to mid-April 2020.

Juranek et al. (2020) revealed that unemployment in Nordic countries expanded tremendously in early 2020,

which impacted short-term labor market performance. Research on G20 countries disclosed that in the first five months of the pandemic, the lockdown measures caused an employment decline in Mexico by 40% and 8% to 9% in Japan and Korea, while the total working hours were reduced by 46% in Mexico and 10% in Australia (ILO & OECD, 2020). Meanwhile, the economic activity shutdown in India led to the job loss of 32 million regular informal employees, 89 million casual workers, and 107 million self-employed individuals living in poverty with low education backgrounds (Ghose, 2020). In 2022, the ILO projected a deficit in working hours equivalent to 52 million full-time jobs globally despite the declaration of the endemic phase by most nations (ILO, 2022). Although the 2022 estimation improved from the 2021 condition, the statistics remained approximately 2% below the global working hours pre-pandemic period.

The overall unemployment rate in Malaysia was recorded at 4.8% in Q1 2021, which is worse than the reported 3.2% in Q4 2019 (Nixon, 2021). During the first year of the pandemic, between March to December 2020, over 100,000 Malaysians lost their jobs in diverse sectors, while 25,000 workers were laid off up to April 2021 (Ministry of Human Resources, 2021). The government policies to contain the pandemic has affected the labor market, thus increasing unemployment and income losses (Kamarudin et al., 2021). The situation is severe for workers in the informal sector with low wages and low access to social protection. Moreover, technological advancements, specifically robotization and automation, have increasingly replaced manual and routine jobs, threatening specific job opportunities. Given that the pandemic has accelerated digital transformation and automation, some workers are no longer required to work at the office (Sawada & Sumulong, 2021). Although not all jobs were equally impacted, the wave of job losses during the pandemic was mainly significant among the informal sector workers, unskilled workers, women, and foreign migrant workers (Sawada & Sumulong, 2021; Kikuchi et al., 2020; Pouliakas & Branka, 2020).

2.2. Unemployment Among Youth

The youth population encountered difficulties acquiring suitable jobs before the COVID-19 pandemic (Camba, 2020; ILO, 2020a). The recent pandemic has exacerbated the situation, which created massive job losses and damaging impacts on the young generation of every nation. The ILO (2020b) disclosed that the economic crisis from the pandemic had caused the major dislocation of young workers from the labor market due to rising unemployment and competition between workers and the growth of digitalization. Recent studies revealed that young workers have a higher probability of retrenchment cases, which causes difficulty in securing new jobs (Lambovska et al., 2021; Gould & Kassa, 2020).

The younger workers are the least experienced and hence the first target to be laid off or reduced working hours, while their lack of connections and experience complicates them from seeking other decent jobs (ILO, 2020b). Similarly, young entrepreneurs or youth cooperatives encounter challenges in obtaining resources and financing and lack knowledge in coping with the challenging business cycle.

Furthermore, many young people commonly work in sectors that tend to be affected by the COVID-19 pandemic. For example, one in three young employees in European Union countries were working in retail, wholesale, cafes and restaurants, and accommodation, which were critically impacted by the lockdown measures (ILO, 2020b). Gould and Kassa (2020) noted that young workers in the leisure and hospitality industry were the worst affected. Considering that many young workers are in informal sectors, such as part-time, contract, freelance, or “gig” employment, their income is primarily low-paid with lower job security. Similarly, Malaysia’s youth unemployment rate has increased following the pandemic (Department of Statistics Malaysia, 2022). Studies in Malaysia (Shakur et al., 2020; Rahman et al., 2020) also supported the fact that the pandemic severely impacted women and low-educated young employees. The crisis pressured the youth to accept any job available in the market, such as food delivery services and online sales (Kamarudin et al., 2021). Nonetheless, employment opportunities improved in Q1 2022 following the endemic phase declaration, thus easing travel restrictions, business operations, and other social activities.

2.3. Unemployment and Challenges Towards Sustainable Development Goals

Previous studies highlighted various devastating effects of unemployment on the economy and individual mental health, psychological, and general well-being. Bianchi et al. (2021) stated that the COVID-19-related unemployment shock is two to five times larger than the normal unemployment shock, resulting in a tremendous increase in mortality rates and a decrease in life expectancy. Earlier studies outlined that income loss adversely impacts white males’ psychological and physical health (McKee-Ryan et al., 2005; Brenner, 2005). Furthermore, Roelfs et al. (2015) outlined the relationship between unemployment at the individual level and decreased health and higher mortality rates. Wilson and Finch (2021) identified several mechanisms where unemployment could deteriorate health levels, stress, and lack of self-esteem from the loss of work structure and perceptions associated with unemployment, financial difficulties, and the social security system, which deteriorates mental health due to claims process and job searching. Additionally, the unemployed exhibit poorer mental health than those on leave or employment. The scenario prompts considerable challenges for the world

to realize SDG 3, ‘Good health and well-being.’ Although access to basic healthcare is increasing and great progress has been made to increase life expectancy, mental illnesses arising from unemployment and pandemic-related issues should be emphasized.

Rising unemployment indicates lesser income, less purchasing power, and higher financial hardships among the people. The situation worsens when the cost of living has expanded in certain countries, which increases the general price of necessities. In Malaysia, 80% of food components in the food and beverages sector increased in Q2 2022 due to the increase in global commodities and animal feed costs (The Star, 2022). Specifically, the unemployment issue and youth unemployment challenge the realization of SDG 8, ‘Decent work and economic growth.’ Goal 8 outlines several targets, such as substantially reducing unemployment among the youth by 2020 and achieving full and productive employment and decent work for all women and men (including those with disabilities), and providing equal pay for work of equal value by 2030. The government encounters challenges in realizing SDG 8 following the pandemic, as many young people are working in the informal economy and receive fewer opportunities for unemployment benefits (ILO, 2020b). Furthermore, the less efficient labor market institutions among the low-and-middle-income economies hinder the youth from gaining decent employment. This group can no longer afford to be unemployed due to their limited or non-existent savings. The increase in youth unemployment pressures individuals and impacts society in the long run. Youth unemployment risks include wasting talent, education, and training, which should be handled properly for the nations to focus on realizing SDG 8 by 2030.

3. Research Methodology

The study data were extracted from the Datastream database, which comprised the unemployment rate, youth unemployment, male and female unemployment, and retrenchment rate in Malaysia from 2014 to 2021. Additionally, the number of retrenchment cases was examined based on the sectors from Q1 2019 to Q4 2021. Given that the pandemic significantly impacted the unemployment rate, examining the data based on gender and age will identify which group was more affected by the pandemic. Moreover, a detailed analysis of the sectors with high retrenchment cases may provide information for the government to plan backups or policies to assist the adversely affected individuals. Secondary data from the Department of Statistics Malaysia and the Central Bank of Malaysia were also employed in the discussion. The study also identified the issues surrounding the unemployment landscape in the country and current government incentives to minimize the impacts.

4. Results

Similar to other countries, Malaysia has been affected by the COVID-19 pandemic. The effects have spread deeper into the Malaysian economy, thus increasing unemployment and diminishing incomes. Due to the COVID-19 pandemic, Malaysian businesses were forced to close while the number of infected people rose. During a recession, productivity falls, and unemployment increases (Casadio & Williams, 2021). The decline in economic growth has impacted small business owners, B40 groups, foreign workers, and the poor.

Table 1 demonstrates the unemployment rate of the male and female population in Malaysia from 2014 to 2021. The trend indicates that the rate expanded significantly in 2020 when COVID-19 hit the country, with an increment rate of 1.23% for males and 1.27% for females. Female workers were more adversely affected as the increment was higher than unemployed male workers, which aligned with previous studies (Sawada & Sumulong, 2021; Kikuchi et al., 2020; Pouliakas & Branka, 2020).

Table 2 displays a similar unemployment trend among the youth population. The findings reflect the global

Table 1: Male and Female Unemployment Rate from 2014 to 2021

Year	Male	Percentage of Increment	Female	Percentage of Increment
2014	2.67	-0.29	3.22	-0.27
2015	2.92	0.25	3.39	0.17
2016	3.14	0.22	3.93	0.54
2017	3.15	0.01	3.83	-0.1
2018	3.09	-0.06	3.63	-0.2
2019	3.17	0.08	3.4	-0.23
2020	4.4	1.23	4.67	1.27
2021	4.5	0.1	4.8	0.13

Table 2: Male and Female Youth Unemployment Rate from 2014 to 2020

Year	Male Youth	Female Youth
2014	8.63	10.91
2015	9.91	11.841
2016	9.83	11.42
2017	9.87	11.49
2018	9.89	12.52
2019	9.58	11.98
2020	11.43	12.96

phenomenon of difficulties among the youth to acquire a decent job during the pandemic, as highlighted in Gould and Kassa (2020), ILO (2020b), Cheng (2020), and Rahman et al. (2020).

Figure 1 portrays the retrenchment cases by sectors from Q1 2019 to Q4 2021. The number of retrenchment cases increased significantly starting from Q1 2020 and continued to rise following various government restriction measures to curb the pandemic. The services sector was most affected, with over 130,000 retrenched cases within three years. Figure 2 illustrates the number of retrenched instances for the services sector based on the business nature. The highest cases were in wholesale, retail, trade hotels, and restaurants, with 38% of the total cases in the services industry. The scenario is due to the government implementing movement control orders during the peak of the pandemic, which restricted business operating hours, dine-in, and interstate traveling, hence impacting the businesses and forcing worker retrenchment or business shutdown.

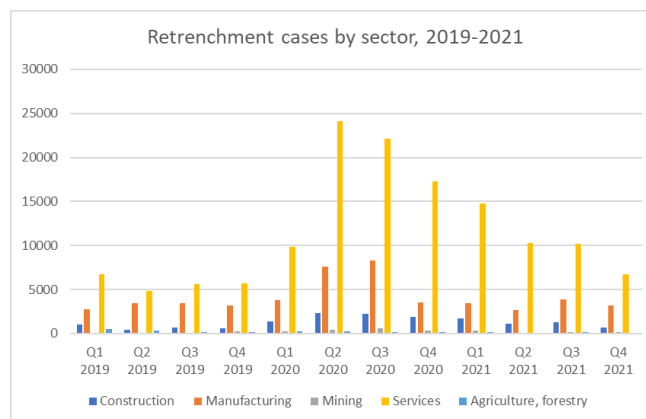


Figure 1: Retrenchment by Sectors, Q1 2019–Q4 2021

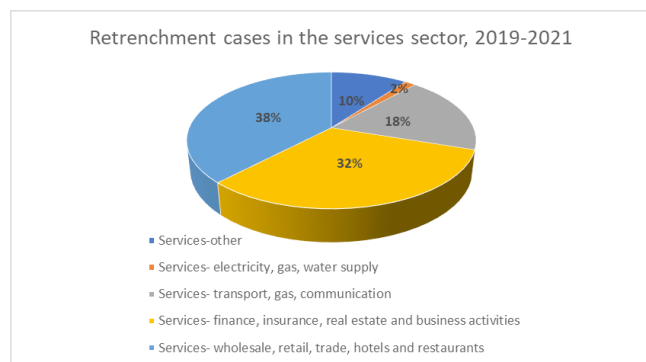


Figure 2: Retrenchment Cases in the Services Sector 2019–2021

5. Discussion

The post-pandemic years taught the whole population and the government about being robust and marketable in the workplace and business survivability. Overall, several factors contribute to the employment trajectory in Malaysia, as the following.

5.1. Issue 1: Demand for Employment

One of the most serious unemployment issues is a mismatch between employee skills and organizational roles. Upskilling and reskilling are two essential skills required in the workplace. According to the Cambridge dictionary, upskilling is learning new skills or teaching workers new skills, while reskilling is learning new skills or training people to perform a different job (Li, 2021). The two elements allow an organization to develop the skills required by employees in their roles to remain competitive in Industry 4.0. The National Tech Association of Malaysia recorded that approximately 98,000 new jobs will be created in the first half of 2021 due to the rapid digitalization caused by the pandemic, which will increase throughout the year. Salaries in the digital industry are projected to increase by only 0.1% in 2019 and 2.0% in 2022 (Birruntha & Jaafar, 2021). The pandemic has directly affected the economy and created job losses, hence migrating regional workforces. Therefore, recent graduates gravitate towards higher-paying jobs and longer-term residences in economically developed countries, specifically when the wages are higher.

The local information and communication technology (ICT) and digital industries will lose competitiveness as the demand for local graduates decreases, thus decreasing marketability. As the industry develops, the situation becomes increasingly difficult for recent graduates and seasoned professionals to advance. The nation experiences a long history of unemployment concerns and difficulty seeking employment that utilizes available skills. Individuals who have been unemployed for an extended period are also affected, along with recent graduates. As technology progresses, maintaining a successful career in this particular economic sector becomes increasingly complicated.

5.2. Issue 2: The Role of Government and Businesses

The misalignment between market needs and what the graduates offer is primarily the result of government policy. As the government develops new plans, blueprints, and policies, public and private higher education institutions create programs to supply future manpower and the right skills. Higher education institutions adhere to all government policies rather than market needs, which are not based on

proper evidence-based market research. Higher education institutions also create courses without additional research to determine any future demand for that type of education in the labor market (Shahriar et al., 2021). Olo et al. (2022) outlined crucial factors that should be considered by educational policies to establish the conditions for gradual adjustment to the job market needs. Furthermore, some actions must be taken in the short- to medium term to prevent issues.

The knowledge gap will lead to unemployment issues, hence negatively impacting the economy, such as by increasing underqualified workers and developing an unresponsive and inactive workforce. If the government continues to train people in the current labor market, the country will produce manpower who are unprepared for future opportunities. Students in higher education institutions should receive mental preparation from their educators before entering the workforce (Chamorro-Premuzic & Frankiewicz, 2019) by reducing the amount of theoretical coursework and emphasizing human behavioral studies. The education sector should instead concentrate more on broad social skills, broad learning, and analytical, technological, and creative skills. Problem-solving, idea generation, visualization, and analytical thinking are all critical higher-order thinking skills. Summarily, the government, higher education institutions, and businesses must collaborate to create a proper learning environment in universities.

5.3. Issue 3: The Effect of Gig Economy Towards Unemployment

The term “gig economy” describes work arrangements, such as freelance, temporary, or contract-based. A significant portion of the work involves online interactions with clients or customers. The growth of the digital industry enabled anyone at any time and location to instantly access online platforms. Consequently, the number of workers participating in the gig economy has risen. Due to flexible working hours and job locations, young people enjoy the freedom to select the type of work and the amount of money they are paid. Work environment flexibility is a tremendous advantage in gig economy employment (Wood et al., 2019; Bulian, 2021). Furthermore, many people were unexpectedly terminated from their permanent jobs during the pandemic. Thus, this type of job has been a lifesaver.

The individuals performing the work are not employees of the companies. Hence the arrangement highlights numerous drawbacks. Although the gig economy has created millions of jobs, most are low pay. Therefore, the jobs do not add much value and cause longer-term structural issues as the workers need to consider other expenses, such as the Internet, fuel, and vehicle maintenance (Behl et al., 2022). A lack of financial security exists as the workers are not paid if no requests or work for the day is received.

Additionally, the rise in gig economy jobs increased the competition between workers. The situation becomes an issue as they may not receive any requests or work for the day, affecting monetary stability. Another disadvantage is that the companies do not employ these workers who own no insurance or medical coverage in case of sickness or accidents.

5.4. Minimising Unemployment Concerns

The government has implemented various incentives to minimize unemployment and assist the population in obtaining decent jobs and stable incomes. First, the policy on minimum salary was enacted to maintain national competitiveness with other developed countries. The policy was initially established as part of the “Minimum Wage Order 2012” and finally came into effect in December 2013. The government has continually raised the minimum wage between RM100 and RM200. In April 2022, the minimum salary required by the policy is currently RM1,500. iPrice Group Sdn Bhd highlighted that the average cost of living per person in Malaysia is RM3,300, which is triple the minimum wage (Azman, 2021). Therefore, the minimum wage in Malaysia is extremely inadequate compared to the cost of living in urban areas such as Kuala Lumpur, Penang, and Johor Bharu. Most Malaysians, specifically city dwellers, have inadequate income to cover their living costs (Azman, 2021).

The government introduced JaminKerja hiring incentive program with a budget allocation of RM2 billion. The incentive encourages employers to hire people to work and aims to employ approximately 300,000 workers. Furthermore, the government will pay 20% of a new Malaysian employee’s monthly salary for the first six months and 30% for the next six months, provided the job pays at least RM1,500. According to The Edge Markets (2021), employers anticipate tax deductions of RM2,000 to RM7,000 to facilitate worker training and education, while RM1.1 billion was allocated for training and education programs for 220,000 trainees. Such a program will benefit people’s employment, particularly when many businesses and companies have been closed.

Various efforts were made to assist people with living difficulties, specifically during the pandemic. The government realized that delaying the management of unemployment issues may impact household income and purchasing power and in the long run threaten government efforts to achieve SDG 8, which promotes sustained, inclusive, and sustainable economic growth with complete and productive employment and decent work for all citizens. Ultimately, failure to earn a decent income would disadvantage the nation in achieving SDG 1, SDG 2, and SDG 3 by 2030, as proposed by the UN.

6. Conclusion

The pandemic has caused numerous effects on the national employment landscape of the country. During the two years when the cases of COVID-19 were widespread, many people were left jobless due to government-imposed restrictions. Short-term effects indicate that the women and youth population are the most affected category, while the services sector recorded the highest retrenchment cases in the country. Although the unemployment trend has increased post-2020 compared to pre-2019, the rate has gradually decreased in 2022 following the endemic phase declaration and easing restrictions. Nevertheless, many factors must be considered to sustain long-term national development despite the COVID-19 crisis. The pandemic has once impacted the employment landscape in Malaysia, which may slow down the government’s effort to achieve SDG 8, ‘Decent work and economic growth,’ which indirectly affects SDG 1, ‘No poverty,’ SDG 2, ‘Zero hunger,’ and SDG 3 ‘Good health and well-being.’ Figure 3 summarises the effects of the pandemic on the unemployment landscape and SDG in Malaysia.

The government has announced several recovery programs to aid national recovery from the pandemic, which includes the 12th Malaysian Plan to rebuild Malaysia. Thus, businesses can efficiently adapt to future crises in another pandemic by embracing the changes in the working environment. Furthermore, working remotely to transform digitally and the endless efforts to make a living have provided the nation with a wealth of new experiences. As most companies embrace digitalization in the aftermath of the pandemic, most businesses have emphasized several

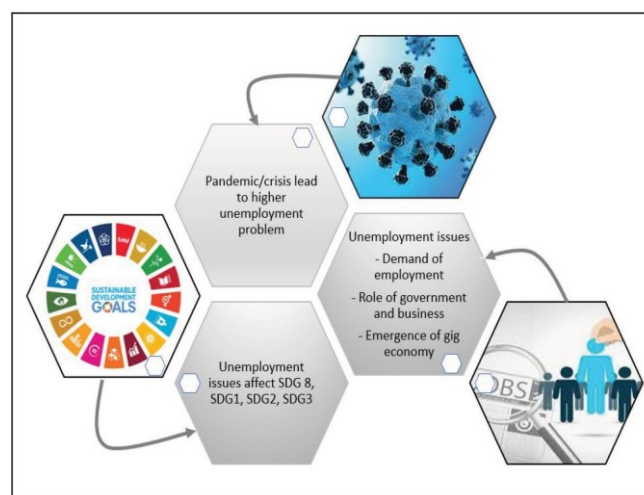


Figure 3: The Effects of the Pandemic on Unemployment Landscape and SDG in Malaysia

skills when hiring talent due to a mismatch between industry requirements and graduates' study fields. Potential employers will prioritize candidates with relevant skills aligned with machines and technology.

All development initiatives must be strengthened to respond adequately to internal and global concerns. In Malaysia, workforce upskilling is a collaborative effort involving all relevant stakeholders. Ultimately, the whole nation is expecting to witness substantial transformation in the industries. All stakeholders, including respective employers, employees, leaders, government, and institutions, should collaborate to upskill the Malaysian workforce and increase market demand as the country approaches digitalization. Furthermore, educational institutions can guide individuals towards attaining the expertise level required by the industry sectors and develop them towards professional advancement. Lastly, the government must realize that creating more low-wage jobs will impact the next generation, which leaves them with unnecessary skills irrelevant to the industries. The development in the gig economy should be monitored closely so that freelancers' jobs will be temporarily based. Instead, the government agencies and the private sectors should emphasize enhancing the knowledge and skills of the workers, especially fresh graduates or retrenched workers, to obtain a more stable income or high-paying jobs in the future.

References

- Azman, N. H. (2021). Data shows the average cost of living in KL is RM3,300 monthly. *The Malaysian Reserve*. <https://themalaysianreserve.com/2021/04/26/data-shows-average-cost-of-living-in-kl-is-rm3300-monthly/>
- Behl, A., Rajagopal, K., Sheorey, P. A., & Mahendra, A. (2022). Barriers to entry of gig workers in the gig platforms: Exploring the dark side of the gig economy. *Aslib Journal of Information Management*, 74(5), 818–839. <https://doi.org/10.1108/AJIM-08-2021-0235>
- Bianchi, F., Bianchi, G., & Song, D. (2021). *The long-term impact of the Covid-19 unemployment shock on life expectancy and mortality rates* (Working Paper Series No. 28304). Cambridge, MA: National Bureau of Economic Research. <http://www.nber.org/papers/w28304>
- Birruntha, S., & Jaafar, S. F. (2021). Job opportunities in the digital industry are expected to rise. *The Malaysian Reserve*. <https://themalaysianreserve.com/2021/10/07/job-opportunities-in-digital-industry-expected-to-rise/>
- Blustein, D. L., Duffy, R., Ferreira, J. A., Cohen-Scali, V., Cinamon, R. G., & Allan, B. A. (2020). Unemployment in the time of COVID-19: A research agenda. *Journal of Vocational Behavior*, 119, 103436. <https://doi.org/10.1016/j.jvb.2020.103436>
- Brenner, M. H. (2005). Commentary: Economic growth is the basis of the mortality rate decline in the 20th century—the experience of the United States 1901–2000. *International Journal of Epidemiology*, 34(6), 1214–1221. <https://doi.org/10.1093/ije/dyi146>
- Bulian, L. (2021). The gig is up: Who does the gig economy benefit? *Interdisciplinary Description of Complex Systems*, 19(1), 106–119. <https://doi.org/10.7906/INDECS.19.1.9>
- Camba, A. L. (2020). Estimating the relationship between entrepreneurship and business confidence on youth unemployment in the Philippines. *Journal of Asian Finance, Economics, and Business*, 7(8), 533–542. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO8.533>
- Casadio, P., & Williams, G. (2021). My say: Malaysia is not in recovery yet. *The Edge Markets*. <https://www.theedgemarkets.com/article/my-say-malaysia-not-recovery-yet>
- Chamorro-Premuzic, T., & Frankiewicz, B. (2019). Does higher education still prepare people for jobs? *Harvard Business Review*. <https://hbr.org/2019/01/does-higher-education-still-prepare-people-for-jobs>.
- Cheng, C. (2020). Pushed to the margins: The unequal impacts of the Covid-19 crisis on marginalized Malaysian workers. *ISIS*. <https://www.isis.org.my/2020/11/30/pushed-to-the-margins-the-unequal-impacts-of-the-covid-19-crisis-on-marginalised-malaysian-workers/>
- Department of Statistics Malaysia. (2022). *Key statistics of the labor force in Malaysia*. <https://www.dosm.gov.my/v1/index.php>
- Gould, E., & Kassa, M. (2020). Young workers hit hard by the COVID-19 economy: Workers ages 16–24 face high unemployment and an uncertain future. *Economic Policy Institute*. <https://www.epi.org/publication/young-workers-covid-recession/>
- Ghose, A. K. (2020). The pandemic, lockdown, and employment. *Indian Journal of Labour Economics*, 63(1), 1–5. <https://doi.org/10.1007/s41027-020-00258-x>
- International Labour Organization & Organization for Economic Co-operation and Development (ILO & OECD). (2020). *The impact of the Covid-19 pandemic on jobs and incomes in G20 economies*. https://www.ilo.org/global/about-the-ilo/how-the-ilo-works/multilateral-system/g20/reports/WCMS_756331/lang-en/index.htm
- International Labour Organization (ILO). (2020a). *World employment and social outlook*. <https://www.ilo.org/global/research/global-reports/weso/2020/lang-en/index.htm>
- International Labour Organization (ILO). (2020b). *Young workers will be hit hard by COVID-19's economic fallout*. Retrieved July 18, 2022. <https://voices.ilo.org/stories/young-workers-will-be-hit-hard-by-covid-19s-economic>
- International Labour Organization (ILO). (2021). *World employment and social outlook*. https://www.ilo.org/global/research/global-reports/weso/trends2021/WCMS_794452/lang-en/index.htm
- International Labour Organization (ILO). (2022). *Employment and social outlook trends 2022*. <https://www.ilo.org/global/research/global-reports/weso/trends2022/lang-en/index.htm>, 2022

- Juranek, S., Paetzold, J., Winner, H., & Zoutman, F. (2020). Labor market effects of Covid-19: Sweden and its Scandinavian neighbors. *CEPR*. <https://cepr.org/voxeu/columns/labour-market-effects-covid-19-sweden-and-its-scandinavian-neighbours>
- Kamarudin, S. N., Jasni, N. S., & Mohamed, Z. S. S. (2021). The implications of the Covid-19 pandemic on consumer burden in Malaysia: An analysis. *Journal of International Business, Economics, and Entrepreneurship*, 6(2), 82–95. <https://doi.org/10.24191/jibe.v6i2.16682>
- Kikuchi, S., Kitao, S., & Mikoshiba, M. (2020). *Heterogeneous vulnerability to the COVID-19 crisis and implications for inequality in Japan* (Discussion Paper Series No. 20-E-039). Tokyo: Research Institute of Economy, Trade, and Industry. <https://www.rieti.go.jp/publications/dp/20e039.pdf>
- Lambovska, M., Sardinha, B., & Belas, J. (2021). Impact of the COVID-19 pandemic on youth unemployment in the European Union. *Economic and Managerial Spectrum*, 15(1), 55–63. <https://doi.org/10.26552/ems.2021.1.55-63>
- Li, K. S. (2021). Reskilling is not a panacea for workforce woes, say experts. *The Edge Markets*. <https://www.theedgemarkets.com/article/reskilling-not-panacea-workforce-woes-say-experts>
- McKee-Ryan, F., Song, Z., Wanberg, C. R., & Kinicki, A. J. (2005). Psychological and physical well-being during unemployment: A meta-analytic study. *Journal of Applied Psychology*, 90(1), 53–76. <https://doi.org/10.1037/0021-9010.90.1.53>
- Ministry of Human Resource. (2021). *Employment and labor statistics: Series 28 No. 2*. https://myhos.mohr.gov.my/ebook/istatistik2_2021/mobile/index.html
- Nixon, R. (2021). The permutations of poverty. In M. Menton & P. L. Billon (Eds.), *Environmental defenders: Deadly struggles for life and territory* (pp. 97–103). London: Routledge. <https://doi.org/10.4324/9781003127222-12/PERMUTATIONS-POVERTY-ROB-NIXON>
- Nguyen, P. H., Tsai, J. F., Nguyen, H. P., Nguyen, V. T., & Dao, T. K. (2020). Assessing the unemployment problem using a grey MCDM model under COVID-19 impacts: A case analysis from Vietnam. *Journal of Asian Finance, Economics, and Business*, 7(12), 53–62. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO12.053>
- Olo, D., Correia, L., & Rego, MdC. (2022). (Mis)match between higher education supply and labor market needs: Evidence from Portugal. *Higher Education, Skills and Work-Based Learning*, 12(3), 496–518. <https://doi.org/10.1108/HESWBL-02-2021-0032>
- Pouliakas, K., & Branka, J. (2020). *EU jobs at highest risk of COVID-19 social distancing: Will the pandemic exacerbate the labor market divide?* (Discussion Paper no. 13281). Bonn, Germany: IZA Institute of Labor Economics. <https://www.iza.org/publications/dp/13281/eu-jobs-at-highest-risk-of-covid-19-social-distancing-will-the-pandemic-exacerbate-labour-market-divide>
- Rahman, A. A., Jasmin, A. F., & Schmillen, A. (2020). *The vulnerability of jobs to Covid-19: The case of Malaysia* (Economics Working Paper No. 2020-09). Singapore: Institute of Southeast Asian Studies (ISEAS) Yusof Ishak Institute. https://www.iseas.edu.sg/wp-content/uploads/2020/10/ISEAS_EWP_2020-09_Amanina_Alyssa_Schmillen.pdf
- Roelfs, D. J., Shor, E., Blank, A., & Schwartz, J. E. (2015). Does misery love company? A meta-regression examining aggregate unemployment rates and the unemployment-mortality association. *Annals of Epidemiology*, 25(5), 312–322. <https://doi.org/10.1016/j.annepidem.2015.02.005>
- Sawada, Y., & Sumulong, L. R. (2021). Macroeconomic impact of COVID-19 in developing Asia. *SSRN Electronic Journal*, 16, 37–49. <https://doi.org/10.2139/ssrn.3912360>
- Shakur, E. S. A., Sa'at, N. H., Aziz, N., Abdullah, S. S., & Rasid, N. H. A. (2020). Determining unemployment factors among job-seeking youth in the East Coast of Peninsular Malaysia. *Journal of Asian Finance, Economics, and Business*, 7(12), 565–576. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO12.565>
- Shahriar, M. S., Islam, K. M. A., Zayed, N. M., Hasan, K. B. M. R., & Raisa, T. S. (2021). The impact of COVID-19 on Bangladesh's economy: A focus on graduate employability. *Journal of Asian Finance, Economics, and Business*, 8(3), 1395–1403. <https://doi.org/10.13106/jafeb.2021.vol8.no3.1395>
- The Edge Markets. (2021). *Budget 2022: Tax deductions of RM2,000 to RM7,000 for upskilling courses*. <https://www.theedgemarkets.com/article/budget-2022-tax-deductions-rm2000-rm7000-upskilling-courses>
- The Star. (2022). *Inflation increases by 2.5% due to food, fuel prices increase in 2021*. <https://www.thestar.com.my/business/business-news/2022/06/01/inflation-increases-25-due-to-food-fuel-prices-increase-in-2021>. Kuala Lumpur, June 1.
- United Nations (UN). (2021). *COVID crisis to push global unemployment over 200 million mark in 2022*. <https://news.un.org/en/story/2021/06/1093182>
- United Nations (UN). (2015). *Sustainable development goals*. <https://sdgs.un.org/goals>
- Wilson, H., & Finch, D. (2021). *Unemployment and mental health: Why both require action for our COVID-19 recovery*. <https://www.health.org.uk/publications/long-reads/unemployment-and-mental-health>. Health Foundation.
- Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Good gig, bad gig: Autonomy and algorithmic control in the global gig economy. *Work, Employment and Society*, 33(1), 56–75. <https://doi.org/10.1177/0950017018785616>