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Socio-Economic Impact of Telework for Workers with Disabilities in Indonesia

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Abstract

The COVID-19 pandemic has changed the structure of people's lives, including the work models. The telework work model is increasingly being used because it is considered capable of facilitating mobility, cost efficiency, and offering time flexibility for workers. Most studies about telework and disabled persons focus on cases in developed countries and increasing job opportunities. This study aims to provide an overview of the socio-economic impact of telework on Persons with Disability (PwD) in developing countries, specifically in Indonesia. This study uses a qualitative method with case study approach. Data were collected by in-depth interviews and literature studies on articles, journals, books, and open-source references regarding telework and disability. This study found that the telework model has made disabled workers in Indonesia even more marginalized. Moreover, the telework model had triggered financial difficulties among disabled workers, such as salary cuts, temporary and permanent lay-offs, and job loss. Furthermore, this is because most disabled workers in Indonesia have low education level, skills, limited access to the internet, and limited access to telework facilities. Meanwhile, this study aims to provide an overview of socio-economic impact from telework models on disabled persons in developing countries, especially in Indonesia, where most disabled persons have low education level and poor digital skill. This study offers recommendations to create an inclusive telework market, that is; conduct job analysis, improve the education system and digital skill for PwD, provide assisting and supporting facilities, guarantee for workers with disability, as well as monitoring and evaluation.

Keywords: Telework, Person with Disability (PwD), Socio-Economic, Workers with Disability, COVID-19

Abstrak

Pandemi COVID-10 telah mengubah struktur kehidupan masyarakat, termasuk model kerja. Model kerja *telework* mengalami peningkatan karena dinilai mempermudah mobilitas, efisiensi biaya, dan menawarkan fleksibilitas untuk pekerja. Pada umumnya, kajian tentang telework dan penyandang disabilitas dilakukan di negara maju dan memfokuskan pada perluasan peluang kerja. Kajian ini bertujuan untuk memberikan gambaran dampak sosial-ekonomi *telework* terhadap penyandang disabilitas di negara berkembang seperti Indonesia dengan menggunakan metode penelitian kualitatif dan pendekatan studi kasus. Pengumpulan data dalam artikel ini dilakukan melalui wawancara mendalam dengan narasumber juga studi literatur terhadap artikel, jurnal, buku, atau sumber internet yang berkaitan dengan tema *telework* dan disabilitas. Temuan dalam kajian ini adalah *telework* membuat pekerja disabilitas di Indonesia semakin terpinggirkan. Skema *telework* pada saat pandemi COVID-19 membuat pekerja disabilitas mengalami penurunan upah, dirumahkan sementara, dirumahkan secara permanen, hingga kehilangan pekerjaan. Hal ini dikarenakan penyandang disabilitas memiliki tingkat pendidikan yang rendah, kemampuan dan akses terhadap internet yang terbatas, serta tidak didukung dengan sarana dan prasarana yang memadai untuk bekerja secara *telework*. Kajian ini berupaya menggambarkan dampak sosial ekonomi dari *telework* kepada penyandang disabilitas di negara berkembang, seperti Indonesia, yang pada umumnya memiliki tingkat pendidikan dan kemampuan digital yang rendah. Kajian ini memberikan rekomendasi untuk menciptakan pasar kerja telework yang inklusif, yakni; melakukan analisis pekerjaan, meningkatkan sistem pendidikan dan keterampilan digital bagi penyandang disabilitas, menyediakan fasilitas pendampingan dan dukungan sarana prasarana, jaminan bagi pekerja penyandang disabilitas, serta pemantauan dan evaluasi.

Kata kunci: Telework, Penyandang Disabilitas, Sosial Ekonomi, Pekerja Disabilitas, COVID-19

INTRODUCTION

Some people, especially those who live in sub-urban areas and usually commute to the town to work, find working from home or teleworking as effective options to avoid traffic, reduce commuting time and cost, increase working effectiveness, more flexible hours, and more time to spend with families. The telework model has become popular in many countries since COVID-19 pandemic, including in Indonesia. The COVID-19 pandemic that hit the world led all heads of state to respond with various policies aimed at controlling the spread of the viruses (Sukarno & Saleh, 2022). The pandemic has changed people's lifestyle, including working style. People used to work in offices on a daily basis, but now during and after the pandemic people are used to working from home. Almost all countries require their citizens to work from home during the pandemic. This work from home system was meant to help flattening the curve of COVID-19 cases that was firstly found in Wuhan, China, in 2020.

Three years have passed since the first case of COVID-19 and yet the telework model is still popular and considered as an effective and positive working system. Increased flexibility and worker autonomy are benefits of telework for both employees and employers. Freedom in managing activities and locations in doing work is a form of worker autonomy in the telework scheme (Dima et all., 2019). However, one of the challenges that most people don't talk about teleworking is how it badly affects the vulnerable groups such as PwD. Earlier studies about telework and disability found positive impacts such as expansion of job opportunities for PwD and help to to commute to their work-place safely (Linden & Milchus, 2014; Mcnaughton et al., 2014; Moon et al., 2014; Nishina, 2010). Even Schur et al. (2020) called telework after COVID-19 as a 'Silver Lining' for workers with disabilities. However, most of the study was conducted in developed countries where the majority of disabled population have high education levels, advanced work skills, and supportive facilities. In contrast, studies that specifically discuss the socio-economic impact of teleworking for PwD in developing countries for instance Indonesia are still rare; where the majority of PwD have low education level, low working skills, lack of access to internet and technology, as well as teleworking facilities. The consequences of epidemic must be evaluated over time for people who suffered from functional limitations before COVID-19 as their physical and mental condition may be modified by the epidemic and specifically the consequences of telework (Godeau et al., 2021).

This paper argued that the telework model has made disabled workers in Indonesia become more marginalized as many of them were temporarily laid off, lost their job, nor lost their income. Discussing people with disabilities and the access to employment opportunities, there are several studies that cover this. Studies from Heymann et al. (2022) explained that the ratio of employment to population, especially persons with disabilities, is still low. This is partly caused by the unfair system of wages, training, and promotion in the world of work. Measures of productivity and the character of work are also considered to be one of the causes of inequality that still occurs in the world of work. The same thing was emphasized by Bonaccio (2020) that persons with disabilities have not had the same opportunities in terms of access and opportunities to work as those without disabilities. While related to challenges of digital technology for persons with disabilities, raising awareness in society about disability both from the aspect of fair representation in the digital sphere and accessibility to technological developments is a global challenge today. Standardization of digital access and stakeholder commitment in implementing digital equity that can be accessed by persons with disabilities are important aspects in responding to this challenge (Kolotouchkina et al., 2022). Digital technology that can encourage inclusion has not been properly implemented. In the end, technology-based applications have not been used as a support in encouraging the creation of social inclusion for persons with disabilities (Manzoor, 2018). Dobransky & Hargittai (2016) also sees that people with disabilities encounter many obstacles in utilizing the online world including using computers and the internet. Apart from the challenges faced, Tsatsou (2019) explains that digital inclusion also provides benefits for persons with disabilities. Such as communication constraints and social constraints faced can be helped by digital inclusion. The benefits of digital technology, such as the internet for persons with disabilities, are also one of the focuses in the (Duplaga, 2017). For persons with disabilities who have difficulty mobility, internet technology can help them carry out various activities. Even though the internet provides benefits for persons with disabilities, internet use is still very low compared to people without disabilities.

The term of telework (or telecommuting) has existed since the 1980s. Many countries have applied this system since years before the pandemic. It is undeniable that this work model is increasingly popular during the pandemic. Research shows that telework benefits included saving

time and money, minimizing the COVID-19 spread, and balancing work and life (Zalat & Bolbol, 2022). Factors that influenced teleworking practices in many countries such as the development of information and technology, traffic congestions that interrupted commuting for workers, work locations, and the emerging disabled workers population in some industries. To optimize the telework model, countries need to apply several actions, for instance appropriate job analysis, defining the true goal of teleworking, good understanding of teleworking, and creating performance indexing of teleworking jobs (Budhiekusuma et al., 2017). We can see from the past that teleworking is one of the working style options, especially for works that can be done remotely. Moreover, the telework model was initially designed for disabled workers.

Teleworking can help PwD to work more effectively. One of the challenges that can be resolved with teleworking is office discrimination (Linden & Milchus, 2014). Flexibility offered by teleworking schemes also helps disabled workers in resolving physical barriers like fatigue and body aches, as well as gives more time flexibility that can be spent for medical consultations. Linden (2016) also thinks that the telework model gives better working access and time flexibility for disabled workers that have limited cognitive, sensory, and physical abilities. This condition benefits PwD to optimize their working skills. There are two kinds of flexibility provided by teleworking: flexiplace and flexitime. Flexiplace is about the working strategy that can be done remotely from the office, while flexitime is about time control and flexibility that a person possesses to achieve their working targets (Hesse, 2014).

Learning computer and technology-based telework models may give benefits for PwD. However, teleworking requires adequate technologies that are accessible for disabled workers (Tang et al., 2021). Disabled workers are required to have skills and knowledge to operate the corresponding technologies. The International Labour Organization (ILO) saw that employers still have to provide facilities and programs used for remote working (ILO Sectoral Policies Department, 2016). ILO believes that this is required to maintain work security and avoid frauds and breaches. Security is one of the important factors that employers need to maintain in teleworking. Remote working has more risks of breaches and data leak, hence are the reasons why employers need to elevate their security when applying the telework model. In accordance with the telework model, Novianti & Roz (2020) think that some works are not suitable with telework models and disability, especially works that require heavy tools and machinery exclusively available in the office or factory. The mechanism of telework also adapts to type of work specified by the employers, because employers would understand better in assigning which works that can be done remotely.

Discussion about telework mechanisms is always inherent with the digital divide. Digital divide is an inequality condition between those who have and do not have access to the latest trend of technology and information. Usually, the technology refers to computers, internet, smartphones, and digital television. Before the digital divide came as a theory, the more general concept to describe gap in digital access are information gap, education gap, and computer or media illiteracy. The roots of digital divide emerged in 1990 when the term was used for the first time in an official publication by the US Department of Commerce's National Telecommunications and Information Administration (NTIA, 2022). Since then, the digital divide is defined by the gap between those who have and do not have access to the newest form of technology and information for instance computers and its network, as well as other digital devices like smartphones and digital television (Dijk, 2006).

Studies on the digital divide often examine socio-economic disparities based on factors such as gender, age, education level, occupation, income, caste, and spatial characteristics such as rural-urban divide (Saikia et al., 2016; Sulistyaningsih, 2017). However, there is a lack of research on the digital divide specifically concerning persons with disabilities (PwD). Bricout et all. (2010) have criticized this gap, noting that most digital divide studies tend to focus on general socio-economic disparities and accessibility issues, overlooking the specific challenges faced by disabled individuals in accessing technology. This gap has been referred to as the "disability divide" by John. Furthermore, other studies highlight the neglect of accessibility for PwD by the information and communication technology (ICT) industry, resulting in significantly lower levels of computer usage and internet access among this population compared to the general population (Vicente & López, 2010). Therefore, this research addressing the digital divide specifically in relation to persons with disabilities, ensuring equal access to technology and opportunities for this marginalized group.

This paper utilizes the concept of telework and persons with disabilities to analyze the opportunities and challenges faced by disabled workers in the telework model in Indonesia. By understanding this concept, it can identify the necessary requirements that employers and the government must address in supporting disabled workers before they enter the telework market. Furthermore, it allows us to examine potential collaborations between the private sector and the government to create an inclusive job market, particularly in the context of telework. Additionally, it employs the concept of the digital divide to understand why telework has negatively impacted disabled workers in Indonesia. The digital gap creates difficulties for disabled workers in accessing the growing telework market, especially during the COVID-19 pandemic. This situation has become a socio-economic issue as many disabled workers have experienced layoffs, job losses, and salary reductions. Sulistyaningsih (2017) proposed four dimensions of the digital divide: motivational, material, skill, and usage. The motivational dimension refers to a person's desire to access digital technology, while the material dimension relates to their ability to obtain the necessary technology. The skill dimension focuses on a person's proficiency in utilizing technology, and the usage dimension pertains to their goals when using technology. The greater the distance between an individual and these dimensions, the wider the digital divide becomes.

This article aims to shed light on the challenges faced by disabled workers in the telework model while also providing recommendations to address these challenges and improve access to work opportunities, including the telework job model for persons with disabilities (PwD). Therefore, the article is structured into several chapters for a comprehensive exploration of the topic. First, the introduction sets the context; second, it presents the methods and literature review related to telework, disability, and the digital divide. Third, the findings chapter focuses on the practices of teleworking in Indonesia and examines the socio-economic impacts on PwD. Fourth, it discusses the future of telework for PwD in Indonesia. Finally, the article concludes with a chapter that offers recommendations to create an inclusive telework job market for PwD in the country. This research holds significant importance as there is an increasing recognition of the value that people with disabilities bring to the workforce. Moreover, research on disability and employment has become increasingly crucial in addressing the needs and rights of disabled individuals, making this study timely and relevant (Vornholt, et al, 2018).

RESEARCH METHOD

This study employs a qualitative research methodology (Creswell et al., 2007), specifically adopting a case study approach, to comprehensively investigate the telework phenomenon among

disabled workers, with a particular focus on the challenges posed by the COVID-19 pandemic. To gain a deep understanding of the issues at hand, it has conducted in-depth interviews and extensively examined relevant documents (Pope et all., 2000).

To explore the experiences of persons with disabilities (PwD) in the job market, it has interviewed representatives from the disability community in Indonesia. Their insights provided valuable information regarding the impact of telework, future opportunities, and the challenges faced by PwD in this domain. Additionally, to sought the perspectives of business associations and employers who have actively employed disabled workers within the telework model. This enabled us to gain a comprehensive understanding of the employers' experiences and perceptions regarding the integration of PwD into the telework market. Furthermore, conducting interviews with government representatives to ascertain the presence of any existing or potential programs and regulations aimed at establishing an inclusive telework market. By exploring the government's involvement, aimed to identify initiatives that could enhance the inclusion of disabled individuals in teleworking.

In conjunction with the interviews, it also conducted a meticulous document study that encompassed various sources such as articles, journals, books, and open-source documents (Anggito & Setiawan, 2018). This literature review served to supplement and validate the information obtained from the interviews, enriching our understanding of the telework model and its associated challenges and opportunities for PwD. Overall, through the combination of in-depth interviews and a comprehensive review of pertinent literature, this study seeks to provide a holistic examination of teleworking among disabled workers. By gathering insights from multiple stakeholders, aiming to generate a nuanced understanding of the experiences, perspectives, and potential avenues for improvement in the telework market for persons with disabilities.

RESULT AND DISCUSSION

The COVID-19 Pandemic and Telework Model in Indonesia

Mobility restrictions during COVID-19 pandemic halted all business activities, resulting in industries forced to adapt a new working style. Industries relied on digital technology to continue their office operations. Working in the pandemic era became dependent on telework models, video conferences, and cloud storage services. There were surges of teleworking style in France, Italy, Japan, and the United Kingdom during the pandemic (Vornholt et al., 2018). The surges of teleworking were more popular among big companies and corporations. However, these systems and services couldn’t help all types of work. For example, in Australia, 89% of people said that their job characteristics weren’t suitable with the telework model (OECD, 2021). Moreover, teleworking was also impossible due to other factors; employers did not provide telework options, poor access to the internet and supporting devices, as well as poor house conditions for teleworking.

The telework model is common among developed countries, but in developing countries such as Indonesia, telework schemes are not very popular. It is unknown when was the beginning point of the telework model in Indonesia, but some occupations like telemarketing, content provider, and document translation have used the telework model since a long time ago. Few Indonesian companies adopt the telework model. Companies that adopt this model are mostly creative industries, foreign companies with non-existing physical office buildings in Indonesia, and telecommunication companies. The working hour also varies, starting from half-and-half working hours in office and remote, to fully remote working hours. Training is necessary in the

telework model, such as training on action plan and key performance index making, as well as recruitment system (Sadida, 2013).

The telework model in Indonesia had its popularity since the COVID-19 pandemic. This began when the president, Joko Widodo, requested Indonesian citizens to work and study remotely from their home in a press conference on March 15th, 2020. Later, the government issued a Letter of the Minister of Administrative and Bureaucratic Reform of the Republic of Indonesia number SE-19 year 2020, March 16th, 2020 on System Adjustment for State Civic Apparatus to Prevent COVID-19 Spreading in Government Agency Environment. The minister also issued Letter number SE-45 year 2020, April 9th, 2020, on System Adjustment for State Civic Apparatus Workplace Located in Large-Scale Social Restrictions (Hartanto & Sanica, 2021). The government issued these regulations in response to social restrictions in dealing with the COVID-19. However, the telework model was meant to be temporary until the COVID-19 pandemic status was lifted.

Implementing the telework model in Indonesia was not an easy task. There were several challenges including inadequate low-end technology, information, and communication devices, and lack of internet access. The lack of infrastructure is a common challenge found in developing countries. Digital transformation was crucial during the pandemic and yet one of the biggest challenges that required attention. Other than infrastructure, digital illiteracy is one of the challenging factors that slowed down the telework system. The telework method demands good understanding and usage proficiency of digital devices and their applications (Ruth et al., 2021). The digital divide hinders the telework implementation in the workplace. Triwibowo (2021) explained that there is an internet and computer access gap in Indonesia. Only 53.7% and 18.8% of Indonesians use the internet and have a laptop, respectively. The quality of internet services is also not entirely stable throughout Indonesia. Study done by Smeru Research Institute (2022) explained that the Java Island has the most internet users in Indonesia. The 3G and 4G networks cover 30% of villages in Maluku, North Maluku, Papua, and West Papua. However, the service signal is weak almost all the time. Around 70% of these areas experience service signal disturbances. Aletha (2021) also explained that gap in technology knowledge is one of the challenges that slow down the implementation of telework. Moreover, the other challenges were some companies choose not to provide supporting facilities for telework. In Indonesia, special regulations regarding telework are nonexistent. The non-existing telework regulation blurs the boundaries of salary, working hours, and worker's compensation, including support facilities for telework. Different case happens in Brazil where the minimum content of a teleworking contract is regulated. Employers are required to provide technology devices, clear working schedule, remote working mechanism, and working tool responsibilities (Yulianti, 2020). This kind of work contract is required to create balance between rights and responsibilities of employers and employees.

Therefore, it shows that there are conditions that should be met to support the telework model. The digitization phenomenon during COVID-19 pandemic forced people to adapt with digital devices in all of their lifestyle aspects. Communication, information, and technology were the base of almost all activities. Offices, both from the private and public sectors, apply the work from home regulation. Institutions must hold training for employees to work from home effectively. Technology infrastructure, equal digital literacy for all social classes, and clear regulation on telework models are still nonexistent in Indonesia should get more attention. In realizing a digitally literate society, various technology and information training are needed (Ummah et all., 2022). Access to the internet and computers is a problem in creating digitalization

in society. Limited skills and economic capacity of the community also affect the operation of technology. On the other hand, the technological gap between the younger generation and the previous generation is also an obstacle in creating digitalization in society (Rahmadany & Ahmad, 2021).

Telework Issues for Workers with Disabilities in Indonesia

The COVID-19 pandemic greatly impacts the working activity in almost all sectors. Mobility restrictions and economic restrictions affected the labor market all over the world. Layoff waves happened to protect companies' productivity. However, in this situation, disabled workers had greater loss than able-bodied workers. The COVID-19 pandemic restructured working style with the telework system. Employers started to accommodate works that can be done remotely from home. Practically speaking, not all disabled workers benefited from the system. For example, workers with sight disabilities would struggle in doing telework. During the pandemic, the percentage of disabled workers working with telework systems was smaller than able-bodied workers. Throughout May 2020 to June 2021, disabled workers who worked with telework were only 19.4%. This number is significantly different from able-bodied workers that was around 23.6% (Kruse et al., 2022).

The same phenomenon also happened in Indonesia. Disabled people have become more marginalized since COVID-19 pandemic struck. They were considered as the most unfortunate community when compared to other vulnerable groups during the crisis. Far before the pandemic, they already have struggled accessing basic needs, such as health services, education, and job opportunities. Those struggles worsened since the COVID-19 pandemic where all activity should be done from home, including when the government of Indonesia implemented the lockdown regulation that forced companies to apply work from home. Working from home, or what is hereinafter called as telework, put disabled persons in working disadvantages that varied from salary cut, temporary layoff, to work termination.

The first issue was the salary cut. Based on a study conducted by UNICEF, eight out of ten households with PwD in Indonesia experienced declining income from the COVID-19 pandemic, whereas one out of ten households lost their job (UNICEF, 2021). Gufroni Sakaril, one of our source persons who is the head of Association of Disabilities in Indonesia *(Perkumpulan Penyandang Disabilitas Indonesia* (PPDI)), stated similarly to UNICEF's finding. Gufroni explained that most disabled workers that experienced salary cuts came from the informal workers sector. Other than the salary cut, Gufroni also said that there were disabled workers that did not receive any salary because of the work from home scheme. He explained:

> "In the informal sector, our network conducted a survey that stated more than 80% of disabled workers experienced a salary cut up to more than 50% of their total wage. Even some of them did not receive any kind of payment, especially our members with sight issues and worked in massage parlors where their place of work stopped receiving customers. They changed professions to selling crackers and foods with so little to earn. That's why they required material assistance from the government and their relatives" (Personal interview, January 6th, 2022).

Second issue is temporary work from home without jobs. This happened to disabled workers in the formal sector. Almost all workers, both disabled and non-disabled, were working from home during the COVID-19 pandemic. Only workers in essential sectors like health and banking sectors could work from their office. Gufroni said that he is a corporate relations employee in a private television company in Indonesia and was sent work from home during the pandemic.

Based on his experience, working from home had decreased his workload. He even experienced days without work and felt guilty of the salary he received. Gufroni stated:

> "I worked for several days but it wasn't fully teleworking. I worked from home. During that period, I only had meetings and no workload. It almost felt like I was paid for nothing" (Personal interview, January 6th, 2022).

What Gufroni experienced was also experienced by others. Our interview with Country Head of Human Resources (HR) in Standard Chartered Indonesia, Suryantoro Waluyo, showed similar experience among other disabled workers. Suryantoro explained most disabled workers in Standard Chartered are blind. The population was 20 employees and they work in customer care service. When the pandemic struck, just like other workers, the disabled workers in Standard Chartered Indonesia had to apply for work from home. Suryantoro said that, in the end, their disabled workers were not able to work due to lack of working facilities that can support them to work from home. He also said that it was impossible to move those facilities from the office to the employees' homes. Suryantoro mentioned:

> "The technology used for contact centers are immobile and can't be taken to employees' homes. If only we had adequate infrastructures (to do so). The job also required employees to be directly in contact with customers. Unlike other divisions like finance, human resources, or legal, they do not have direct contact with customers and work from home is 100% possible for them." (Personal interview, June 29th, 2022).

The next issue of telework on disabled workers is termination of work or laid off. Gufroni Sakaril explained that disabled workers, both from informal and formal sectors, also experienced termination of work.

> "During the pandemic, my friends from the community reported that some experienced termination of work and layoff (temporary and permanent layoff). It also happened to those who work in the formal sector. Workers from informal sectors are the most impacted." (Personal interview, January 6th, 2022).

In line with Gufroni's statements, data from The National Labor Force Survey (Sakernas) also showed that in August 2020, there was a 20.25% decline of employment on PwD compared to the previous year (Kementerian Tenaga Kerja, 2021). Those who lost their jobs during the pandemic struggled to return to work since the job opportunities for disabled persons are limited at the very beginning. The COVID-19 pandemic has narrowed the job opportunities because of unwritten rules from work from home policy requiring knowledge, digital skill, and facilities at home, which is not possessed by disabled workers in Indonesia.

There are several reasons why disabled workers in Indonesia were unable to enter the telework labor market. First, the low education level of disabled workers in Indonesia. Based on The National Survey of Social and Economy 2019 in Indonesia, out of 23.3 million of disabled population, 71% are only elementary school graduates. From the same category, only 43% continued their education to middle school and 32.2% to high school (Larasati et all., 2019). Disabled people in Indonesia struggle to enroll in formal education to the higher level due to lack of inclusive education institutions. For years, disabled people in Indonesia rely on public schools that do not have inclusive and high-quality curriculum for them (Bappenas, 2021). Public schools apply a one-size-fits-all curriculum to both disabled and able-bodied students, even though both students have different needs. For example, in terms of facility, blind students require audio and

braille books to help them read and access knowledge. Other than facility issues, the formal education in Indonesia also lacks teachers with expertise in teaching disabled students (Abdin & Tetelepta, 2021). Moreover, lack of awareness in families contributes greatly to poor education levels among disabled persons. Many families of disabled persons ignore the importance of education because they see disabled persons as dependent individuals and require the help of others.

The government of Indonesia has attempted to increase skills of disabled workers with training via Balai Latihan Kerja (BLK) or work training center under the supervision of the Ministry of Labor. However, this attempt hasn't been working optimally because the program is usually held for the public, not specifically targeting the disabled communities. Muchtar Azis, the Director of Competence Standardization of the Ministry of Labor of Indonesia, explained that the absence of a specific class for disabled workers is based on a request from the disabled communities themselves; that they wish to be treated equally to non-disabled workers. Moreover, Muchtar also stated few disabled persons were interested in participating in job training in BLK. As Muchtar stated:

> "We don't have a specific class (for PwD). We also open classes based on the audience numbers. We've discussed these matters with the disabled communities, they said that they prefer inclusive classes than exclusive ones. If the number (of disabled participants) meets the class quota, we'll open a class exclusively for them. But if there's only one or two disabled participants, we'll put them in regular class." (Personal interview, January 26th, 2022).

Other than the absence of exclusive classes, the existing training has not met the needs of disabled persons to enter the formal sector. The classes mainly focus on providing skill training to become entrepreneurs, such as sewing course, handicraft business course, or culinary course, even though maintaining business is not an easy job for PwD, especially in terms of accessing capital, production process, marketing process, and maintaining the business operational. In other words, there's a miss-and-match education against required skills among disabled workers for teleworking jobs. Teleworking jobs usually is a formal job that prescribes minimum education of high school graduates to bachelor's degree as the requirement.

Furthermore, the next issue is poor digital skill and lack of internet access. Based on a study conducted by Smeru Research Institute (2022)**,** only 18% of disabled people in Indonesia have access to the internet. This number is contrast compared to able-bodied respondents, where 50% of them have access to the internet. The number of PwD aged 60 and older with internet access is even lower; only 1% of this category are internet users. Smeru explained that the digital involvement in PwD is greatly influenced by adequate device possession, such as smartphones. Although the smartphone ownership trend is always on the rise for the past decade (from 38% to 58%), only 22% of PwD have smartphones. The number is even lower among PwD aged 60 and above (13%). This is because many smartphones do not have disability-friendly features.

Other than digital skill, the telework model also requires other supporting facilities like personal computer, phone network, and modem connection. These devices are required for communication and fast data transfer. Generally speaking, most employers do not provide these devices for employees to work from home. This is because employers are unable to spend more money on these special devices. This condition worsens the telework condition for people with disabilities, especially those who require extra devices to aid their disabilities. In other words,

employees are required to provide their own working facilities. Other consequences include additional costs that need to be paid by the employee.

Telework in the Future

COVID-19 pandemic has encouraged teleworking schemes in many countries, including in Indonesia. Although not all work sectors are able to implement telework models, the teleworking pattern has changed the habit of traditional working style and shifted to technology-based working systems. At first, telework was a form of policy from the government in response to the COVID-19 pandemic. Now in the new normal era, many companies apply this working model. Telework model in the new normal era was applied with a hybrid working model that combines remote and face-to-face working. It means workers can stay at home for work but at the time when physical meetings are required, they have to go to the office. Oldham (2021) thought that the hybrid model that combines teleworking and face-to-face working systems aims to maintain working flexibility and healthy communication in the office. This hybrid model has also been applied in the United States since 2021. This condition started from the rising desire of workers for more working flexibility with telework.

The rising demand for telework is also followed by rising technology skills among workers like technology knowledge development, working online, and following the application updates and trends. Based on the description above, required skills for teleworking are challenges for disabled workers in the future. Training to improve technology and computer skills are required to strengthen disabled workers' skills so they can work remotely. Other than that, job analysis is also necessary to find suitable teleworking jobs for disabled workers and aspects that can be improved to help disabled workers to work remotely. This mapping can be done by employers, so they can provide better opportunities for disabled persons. For skill building, training is required for disabled workers to gain technology and computer skills and knowledge. This training can be conducted under cooperation between the private sector and government. Consequently, job analysis will help the government to find out the most suitable training scheme for PwD (Atiandina & Darmastuti, 2022).

Telework opportunities for disabled workers rely on employer's regulation. Employers need to define if telework is necessary for operational activities or not. As stated by Myra M. Hanartani from The Indonesian Employers Association on telework opportunities:

> "This is not an obstruction. It depends on the company whether they have teleworked regulation or not. In today's context, many companies apply the work from home regulation. The application of this system depends on how a company manages their regulation on disabled and able-bodied employees." (Personal interview, January 28th, 2022).

Therefore, employers should do job analysis. The mapping can be a basis for employers to provide telework opportunities to PwD. Indeed, this does not apply to all work sectors; it should depend on the type of job and accessibility to the required infrastructure. This mapping should include coordination among the private sector and the government to create an inclusive telework labor market for disabled persons.

The trending telework model during the pandemic is expected to provide opportunities for PwD to enter the labor market. Other than skill issues, lack of supporting infrastructure is also a challenge for disabled people to telework. Government and private sector shall work together to resolve the infrastructure issue in the teleworking model. Therefore, teleworking can be an

opportunity for disabled workers in the future. This aligns with the rise of digitization and demand on digital literacy in the post-pandemic era, despite possible issues that may follow. The spirit of fulfilling human rights for persons with disabilities must receive the attention of the state as an institution which is obliged to protect every citizen regardless of differences in any way (Yulianti, 2020).

CONCLUSION

Working from home or engaging in telework presents a promising avenue for creating new employment opportunities for disabled workers. However, in Indonesia, the majority of disabled individuals face significant challenges such as low educational attainment, limited digital literacy, and insufficient access to necessary infrastructure, rendering them unable to benefit from telework. Consequently, they experience adverse socio-economic consequences, including salary reductions, temporary or permanent layoffs, and even job terminations. This negative impact on their socio-economic well-being highlights the urgent need for the Indonesian government to develop improved working capacities for disabled individuals and foster an inclusive labor market. In light of these circumstances, this study proposes several recommendations.

Firstly, conducting a comprehensive job analysis is crucial to identify suitable remote work options for disabled individuals, as not all types of jobs can be performed remotely by disabled workers. This analysis should involve the active participation of the government, employers, and disability communities, with a focus on targeting companies that have teleworking infrastructures, embrace virtual meetings, are willing to collaborate in adopting telework models, and prioritize the inclusion of disabled workers. Secondly, enhancing the education of disabled individuals based on the findings of the job analysis is vital. This can be achieved through the provision of high-quality and inclusive training programs that encompass both technical skills, such as computer proficiency and Microsoft Office operation, as well as essential soft skills like communication and decision-making. Thirdly, there is a need to improve the digital skills of disabled workers through targeted job training schemes, covering basic skills in using smartphones, operating computers, and accessing the internet. Additionally, it is crucial to provide supportive facilities that enable disabled workers to effectively engage in remote work, such as braille readers for visually impaired individuals to access computers, read web content, and handle emails. Collaboration between the government and employers is essential to ensure the provision of appropriate facilities for disabled persons in the telework model.

Furthermore, assisting employers in recruiting and employing disabled individuals within the telework model should be a priority. The government can play a role in developing modules on telework and providing guidance on effective strategies for recruiting disabled individuals for remote work positions. Moreover, guaranteeing job security by offering incentives to employers who hire disabled workers can help foster greater employment opportunities. Government incentives can be utilized to support training initiatives and the provision of necessary facilities for disabled workers engaging in remote work. Lastly, establishing a robust monitoring and evaluation process is crucial to ensure the effectiveness of the telework scheme. Regular dialogues between the government, employers, and disabled worker communities can facilitate discussions on progress, challenges, and the specific needs faced by employers when employing disabled individuals.

Implementing these recommendations can contribute to the creation of an inclusive telework market for persons with disabilities. This is crucial because every individual, including

disabled individuals, deserves equal rights to access employment opportunities. It is the responsibility of the nation to fulfill the rights of disabled individuals to work, aligning with the principles outlined in the Convention on the Rights of Persons with Disabilities Article 27 on Work and Employment, as well as the SDG 2030 principle of "leaving no one behind." Disabled individuals share the same fundamental reasons as able-bodied individuals in their pursuit of employment: the need for income, skills development, a desire to contribute to society, and the aspiration for independence. Therefore, it requires cooperation and commitment from all stakeholders, including the government, employers, and disabled communities, to collaboratively establish a more inclusive and accommodating working framework for persons with disabilities.

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