Inclusive Labor Market and Participation of Person with Disabilities: Case Study in Indonesia, Denmark, France, and Ireland

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ABSTRACT

An inclusive labor market for persons with disabilities is one of the priority issues discussed in the G20, especially in the Employment Working Group (EWG) field. Typically, the number of individuals with disabilities participating in the labor market is lower than that of their non-disabled counterparts, mainly due to the company's reluctance to hire disabled workers. This study aims to investigate the impact of disability on participation in the inclusive labor market. This research uses panel data from four countries - Indonesia, Denmark, France, and Ireland - spanning the years 2016 to 2021, sourced from the International Labor Organization (ILO). The variables used to determine the factors that influence the participation of individuals with disabilities in the labor market are their educational level, the number of disabled individuals in rural areas and their average income. By using the Fixed Effect Model, it is known that people with disabilities who have received education and the number of people with disabilities living in urban areas have a positive and significant effect on the participation of people with disabilities in the labor market. Meanwhile, the average income of people with disabilities has a negative and insignificant effect on the participation of people with disabilities in the labor market. Efforts to increase the participation of people with disabilities in the labor market are important as welfare reform, indicators of the success of inclusive development and poverty alleviation among groups of people with disabilities.

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1. Introduction

Labor is essential to increase productivity and people’s welfare in national economic activities. Based on Law No. 13 of 2003 concerning Manpower, a worker or laborer is any person who works by receiving wages or other forms of remuneration. So labor can be interpreted as someone who carries out an activity or works and receives wages in return for improving welfare. So labor can be interpreted as someone who carries out an activity or works and receives wages in return to improve welfare. Everyone has the same right to obtain work and employment opportunities. According to Winanto (2019), job opportunities are a situation where there are job opportunities for job seekers, which occurs as a result of job opportunities. All citizens should have the same opportunity to work, although there are criteria that must be met beforehand.

Employment is an issue in almost all developed and developing countries. The disproportionate labor force population with the number of jobs available causes this. The continuously increasing population increases the available labor force, including in the labor market. Available job vacancies also have criteria for recruiting the workforce of education, skills, gender, age, and area of residence. There are even companies or jobs that discriminate against people with disabilities.

Persons with disabilities are a minority group in the social strata of life. As well as the reality of everyday life, people with disabilities are often discriminated against in all aspects of life. Based on ILO data, around 15 percent of the world population, or more than one billion people, are persons with disabilities. This figure is the most significant minority in the world.

The G20 is a multilateral working forum of 19 countries and the European Union. The issue of an inclusive labor market for persons with disabilities is an issue that occurs in almost all countries, so it becomes one of the main issues discussed at the G20, which was implemented earlier in 2022, particularly by the Labor sector (The First Employment Working Group / EWG). Disabled workers are the main subject of the discussion because, in this case, workers with disabilities are vulnerable to losing their jobs. Because losing a job can cause shocks in a country's economy, persons with disabilities by working not only to earn income to meet their daily needs but also to meet additional needs, namely supporting their physical limitations, such as special care to maintain their health condition. Therefore, it is necessary to have an inclusive labor market and to know the factors that influence the number of workers with disabilities. All countries that are members of the G20 have problems regarding the employment of persons with disabilities, such as Indonesia, France, Ireland, and Denmark. Ireland and Denmark are also part of the G20, members of the European Union.

In everyday life, people with disabilities often experience difficulties getting decent jobs due to the stigma still attached in society that people with disabilities cannot do or even complete the work they do because of their deficiencies, even before trying. Seeing this, the government in Indonesia created Law Number 8 of 2016 concerning persons with disabilities, which states that "to realize equal rights and opportunities for persons with disabilities to lead independent, prosperous
lives and without any discrimination or discrimination, This special regulation must aim to be able to overcome the problem of unemployment which workers with disabilities, especially experience.

![Figure 1](image1.png)

**Figure 1.** Number of Labor with Disabilities in Indonesia, Denmark, France, and Ireland 2016-2021

Source: ILO, 2022 (data processed)

In figure, it can be seen that the number of workers in several countries, namely Indonesia, Denmark, France, and Ireland, is very different. Of the four countries, only in Indonesia, the number of disabled workers has decreased every year. In contrast to the other three countries, namely Denmark, France, and Ireland, the number of disabled workers from 2016 to 2021 has fluctuated yearly. In Indonesia, the number of workers from 2016 to 2021 has decreased yearly. Among the four countries, only Indonesia is a developing country. According to the Ministry of Manpower, the decline in the participation of disabled workers is caused by discrimination still occurring in recruiting workers in companies in Indonesia. Indonesia, so it is not easy to enter the world of work.

The difference in the number of workers with disabilities between the four countries from 2016 to 2021 is estimated due to several things, namely the education of people with disabilities, where people with disabilities live, namely those who live in urban areas, and the average wages received by workers with disabilities. These three things influence or relate to the absorption of disabled workers in each country.

According to Anuari (2018), the quality of the country's human resources can be improved, which aligns with the educational goals, namely changes in attitudes, knowledge, and expected student behavior. Persons with disabilities receive the same education as society because being a person with a disability does not mean that he or she belongs to a group of persons with disabilities who have not received or have not received an education.

![Figure 2](image2.png)

**Figure 2.** Number of Persons with Disabilities Who Received Education in Indonesia, Denmark, France, and Ireland 2016-2021

Source: ILO, 2022 (data processed)
Figure 2 shows that among the four countries, the country with the highest number of people with disabilities who have received education in France, followed by Indonesia, Ireland, and the country with disabilities who have received minor education, namely Denmark. The number of people with disabilities who receive education in France is comparable to the number of disabled workers in that country, which has the most significant number of disabled workers among the four countries. The education of people with disabilities is influenced by where they live, namely urban or rural areas.

The area of residence in urban areas influences a person’s condition, affecting the participation of the disabled workforce. People living in an urban area can easily access public facilities the government provides, such as health, education, and government services. So that someone who lives in urban areas has better welfare and standard of living than those who live in rural areas.

The income received by persons with disabilities is lower than that of workers who do not have disabilities. This indicates that there is a disparity in wages for persons with disabilities. Based on chart 1.4, the average income of people with disabilities in Indonesia, Denmark, and France fluctuates yearly. However, in France, from 2016 to 2021, the average income of constantly disabled workers decreased every year. According to Ariusni and Putri (2019), the low average income of persons with disabilities is caused by several factors, including a low level of education of persons with disabilities, low skills, and little work experience.
Based on the background that has been described, this research is intended to find factors that influence the participation of people with disabilities in the world of work, which involve the number of people with disabilities who receive education, the number of people with disabilities who live in urban areas, and the average income of people with disabilities. Therefore, research can be formulated titled "Inclusive Labor Market and Participation of Persons with Disabilities: Case Studies in Indonesia, Denmark, France, and Ireland”.

2. Review Literature

Labor Force Participation

Simanjuntak (2001) concluded that the Labor Force Participation Rate (TPAK) is a specific population group that can be calculated by comparing the labor force and the working-age population of the same group. By all accounts, the labor force participation rate (LPRA) concludes that it is about working age and can also be said about the form of a particular group, for example. B. Men’s groups, women’s groups in cities, educated workers, 10-14-year-old groups in villages, etc. In short, the Labor Force Participation Rate (TPAK) is the total labor force divided by the number of workers in the same group.

\[
TPAK = \frac{\text{The Number of Labor Force}}{\text{The Number Of Labor}} \times 100
\]

According to Sumarsono, Sony (2003), several factors influence the amount of TPK (Work et al.), including:

a. Number of people attending school
   The greater the number of people who attend school, the smaller the labor force and the smaller the TPK. This is influenced by the level of provision of educational facilities and the level of family income.

b. Age
   Young people generally do not have a responsibility that is not as big as a family breadwinner and generally go to school. The population aged 22-55 years, especially men, is generally required to earn a living; therefore, the TPK is relatively large. While the population over the age of 55 years has decreased ability to work, and TPK is generally low.

c. Total Population Taking Care of the Household
   The more members in each family who take care of the household, the lower the TPK. A family determines who works, manages the household, and goes to school.

d. Wage rate
   The higher the wages in society, the more family members are attracted to enter the industry or the higher the TPK.

e. Income Level and Number of Family Dependents
   Families with significant income relative to daily living expenses tend to reduce the number of family members to work, so the TPK is relatively low. On the other hand, families with substantial living expenses relative to their income tend to increase the number of working family members, so the TPK is relatively high.

f. Level of education
   The higher the level of education, the more time available for work. The tendency to work is more significant, especially among women with higher education, and the TPK is also higher.
g. Economic activity

Development programs, on the one hand, demand the involvement of more people. On the other hand, the development program fosters new hopes. The hope to share in the benefits of this development is expressed in an increase in work participation—so the more economic activity increases, the higher the TPK.

Labor

According to Lewis, an excess supply of workers does not pose a problem for economic development. On the other hand, excess workers are capital for accumulating income, assuming that the transfer of workers from the subsystem sector to the modern capitalist sector runs smoothly and the transfer will never become too many. Much labor will encourage even more productivity levels and can be enjoyed quickly by the community.

Keynes claimed that the labor market did not work according to the classical view, where workers have a kind of trade union that tries to fight for the interests of workers by reducing wages.

According to the journal "The Economics of the Labor Market" by Pierre Cahuc and André Zylberberg, labor can be defined as the human resources available to work in an economy. The workforce may consist of workers of varying skills and experience and those who offer their labor and time in exchange for compensation or wages.

The journal "The Labor Market Consequences of Digital Technologies" by James Bessen defines the workforce as individuals actively looking for work or participating in income-generating economic activities. The workforce may also include individuals working in the formal or informal sector, casual workers, or workers under contract.

According to the journal "The Dynamics of Labor Market Polarization" by David H. Autor, labor can be defined as human resources that offer labor and time in exchange for wages or salaries. The workforce can also include part-time or casual jobs, and people can vary in skills and education.

So it can be concluded that the labor is spending his time doing an activity that produces goods/services, which will later be exchanged for wages or salaries.

Human labor in various levels (quality) which is divided into:

a. An educated workforce (skilled labor) is a workforce that has received both formal and non-formal education, such as teachers, doctors, lawyers, accountants, psychologists, and researchers.

b. Trained labor is a workforce that acquires expertise based on training and experience—for example, mechanic, carpenter, carver, driver, technician.

c. Uneducated and unskilled labor (unskilled and untrained labor) rely on physical rather than spiritual strength, such as porters, sweepers, and scavengers.

According to (Masyhuri, 2017), labor indicators are as follows:

a. Labor availability. The labor needed should be adjusted to the needs in an optimal amount. This availability is closely related to the quality of labor, gender, wage level, etc.

b. Labor quality. Skill is a consideration that should not be underestimated where specialization is needed in specific jobs and limited quantities. If we ignore the quality of the workforce, there may be production bottlenecks.

c. Gender. Gender will determine the type of work. Men’s jobs will have quite different functions from women’s, such as transportation, packing, and so on, which tend to be more appropriate for men's work.
d. The wages of female and male workers are different. This difference is also distinguished by class level, education, type of work, and so on.

Disabilities

According to the definition of "disabled" in the Big Indonesian Dictionary, "disability" is a person who carries (suffers). In contrast "disability" is an Indonesian word that comes from the English absorption word "disability" (plural: disabled), meaning handicapped or disabled.

According to John C. Maxwell, a person with a disability suffers from a disorder and/or can interfere with their activities. According to Goffman and Johnson, the most significant social problem faced by "people with disabilities" is seeing them as abnormal to such a significant degree that others feel uncomfortable or unable to interact with them. The environment has stigmatized persons with disabilities as incapacitated in all respects, which is the root of various problems. In limited conditions and other people's negative assumptions, some always try to be independent of others.

Persons with disabilities are members of society and have the right to remain within the local community. Persons with disabilities should receive the support they need in education, health, employment, and social services so that the rights of persons with disabilities from a human rights perspective are categorized as special rights for certain groups of people.

Workforce with Disabilities

According to M. Malu et al. (2019), disabled workers have physical, mental, or sensory barriers that affect their ability to work effectively. Disabled workers have many advantages for employers, such as increased productivity, increased creativity, and the ability to broaden their consumer base. However, workers with disabilities face many barriers in finding and retaining jobs, such as discrimination, stigmatization, and lack of access to training and skills development.

It is essential to create a work environment that is disability-inclusive and friendly to ensure that workers with disabilities can develop their skills and significantly contribute to the economy. Policies that can help create an inclusive work environment include training and skills development focused on the particular needs of the disabled workforce, accessibility facilities, and exceptional support programs to facilitate the integration of the disabled workforce into the general workforce.

Education

According to KBBI, a flat plane is a layered or sloping arrangement, such as the slope of a house or the base of a ladder (plane). High and low dignity (status, status, progress of civilization, rank, degree, etc.). The level is the rank, position, level, or group arrangement. When the level of a position is very important, it shows a difference between the top and bottom of the position. Law No. 20 of 2003 concerning the Education System defines education as an intentional and planned attempt to establish a setting and a method of instruction so that students actively develop their potential through intelligence, self-control, personality, religious and spiritual strength. Noble character and the abilities required by the state, community, country, and himself.

According to Andrew E. Sikula, education is a long-term process that employs structured, methodical techniques to teach management workforce members general-
purpose conceptual and theoretical knowledge. According to the Big Indonesian Dictionary, education is a continuous process that is based on the developmental stage of the students, the variety of teaching resources available, and the curriculum's stated educational objectives. Azyumardi Azra (1999) presents an alternative viewpoint, arguing that education is an activity that a person engages in to develop skills, attitudes, and behavioral patterns for both the present and the future, whether or not they are organized through a particular organization.

So it can be concluded that the level of education is a process of students improving education according to the level they will take in continuing their education. The level of education is pursued in a managerial or organized manner.

**Urban Dwelling**

According to Branch (1996), the city is defined as the residence of several thousand or more residents, while urban is defined as an area built with structures and streets, as a settlement concentrated in an area with a specific density. According to Jorge E. Hardoy, the urban characteristics are:

a. Large size and population for time and place.
b. Is permanent.
c. Minimum density of time and place.
d. Urban structure and layout as implied by actual urban streets and spaces.
e. Places where people live and work.
f. Minimum urban functions specified, including a market, an administrative or government center, a military center, a religious center, or an intellectual activity center with the same institutions.
g. Heterogeneity and hierarchical differentiation in society.
h. An urban economic center that connects an agricultural area on the city’s outskirts and processes raw materials for broader marketing.
i. As a service center for local environmental areas.
j. Center for dissemination, having a philosophy of urban life at that time and place.

Urban areas, often known as cities, are made up of the main city and the surrounding suburbs and fertile areas, which are areas of influence that are outside the city's formal borders. According to UU No. 24/1992, an urban area is defined as a region with a concentration and distribution of government, social, and economic activities, as well as primary non-agricultural activity. It also serves as a location for urban communities.

**Average of Salary**

The thesis of Adam Smith states that increases in total production and population can lead to economic growth. The term "total production" refers to the amount of goods and services produced, and it is determined by a number of factors including the supply of goods, labor, and natural resources. All natural resources must be managed skillfully and economically with labor and capital products in order to maximize output growth. It is feasible to get maximum income or profit with greatest expansion in production.

Tohar noted two aspects to understanding income: the true meaning and the meaning of externalities. Income is the value of a society’s goods and services during a specific period. While income expressed in money is a receipt, it can be salary from work, sales, etc.
According to Gregory Mankiw, people's income is a personal perception (personal income), namely income received by households and non-company economic businesses.

According to Sadono Sukirno, residents receive income for work performed daily, on holidays, or yearly. Meanwhile, according to Soediyono, income is received by community members for a certain period as remuneration for the factors they contribute by forming national production.

3. Research Method

This study uses a quantitative approach using secondary data. The variables used in this study were the number of disabled workers (Y), the number of people with disabilities who received education (X1), the number of people with disabilities living in urban areas (X2), and the average income of people with disabilities (X3). The data collected and processed is annual data from 2016 to 2021. The research locations were conducted in Indonesia, France, Denmark, and Ireland using data published by the ILO (International Labor Organization) and related sources.

The data collection method used in this study is a non-participant observation method. This study uses multiple linear regression as a data analysis technique. Regression models called "multiple regression" include more than one variable. This implies that several factors have an impact on the dependent variable. The ordinary Least Square (OLS) approach with time series data is used in this study. OLS estimation provides minimum variance and all linear regression coefficients, enabling more accurate parameter estimation than is possible with other approaches. A brief description of the OLS assessment is more efficient and precise. Dengan menggunakan data time series yang kemudian di estimate melalui prosedur Ordinary Least Square (OLS) so that the regression model is transformed into a multiple linear regression form as follows:

\[ Y_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \mu \]  

Note:
Y : Number of Disabled Workers in Indonesia, Denmark, France, and Ireland
\( \beta_0 \) : Intersep
\( \beta_1, \beta_2, \beta_3 \) : Coefficient Regresi
X_1 : Number of People with Disabilities Receiving Education
X_2 : Number of People with Disabilities Living in Urban Areas
X_3 : Average Income of People with Disabilities
\( \mu \) : Standard error

4. Result

Table 1. Regression Results

| Labor With Disabilities in Indonesia, Denmark, France, and Ireland 2016-2021 | Coefficient | Standard Error | t | P>|t| |
|---|---|---|---|---|
| Number of Persons with Disabilities who Received Education | 7.657261 | 4.109103 | 1.86 | 0.000 |
| Sqrt Number of Persons with Disabilities Living in Urban Areas | 32.89028 | 7.182994 | 4.58 | 0.000 |
| Average Earnings of Labor with Disabilities | -0.0091446 | 0.0436124 | -0.21 | 0.836 |
| _cons | -655.2337 | 189.9556 | -3.45 | 0.003 |
| F (3, 17) | 12.69 | | | |
| Prob > F | 0.0001 | | | |
| R-Squared | 0.9804 | | | |

Source: Appendix 1 (data processed)
Based on the regression results in table 1, it shows that simultaneously people with disabilities who receive education have a positive and significant effect on the number of disabled workers in Indonesia, Denmark, France, and Ireland. It can be seen from the table that the coefficient on the number of people receiving education is 7.657261 and is positive, meaning that when the number of people with disabilities who receive education increases by 1%, it will increase the disabled workforce by 765.7261%. This happens because a person's education affects skills, insight, knowledge, and competitiveness in the workforce. When someone has physical limitations, it does not mean they fail and cannot compete in the world of work with those with typical physiques. Because when a person with a disability continues to study, they can balance their deficiencies by increasing their knowledge and honing their skills and abilities to be ready to compete and work in the job market, increasing their probability of deciding to work.

In line with research conducted by Zakaria (2015), which states that education has a significant effect on the productivity of an individual and choosing to work, thereby increasing the number of workers. An individual's education will affect the level of productivity so that someone who gets an education will choose to work and become a workforce to increase productivity. The variable number of people with disabilities who live in urban areas is transformed into data using a square root, meaning that from the results of the regression, the coefficient value of the variable number of people with disabilities living in urban areas is 1081.7705 and has a positive value, from these results it means that partially this variable has a positive and significant effect on the number workers in Indonesia, Denmark, France, and Ireland. This is because residents living in urban areas have easier access to public facilities such as education, health, and government services compared to rural areas. The quality of public facilities in urban areas is better, and the quality is guaranteed. Those with disabilities who live in urban areas have easy access to health services to check their health condition regularly so that their health condition is guaranteed and their physical condition is vital. With a strong physical condition, they can carry out their activities smoothly even though they are not like the community in general because of their physical limitations, and they can access education easily. Moreover, the number of jobs available in urban areas is more significant than in rural areas because most of the industry is in urban areas. With conditions of health, education, and the availability of jobs that support people with disabilities, they are ready to compete and join the workforce.

This aligns with research conducted by Mulya (2016), which examined the effect of the distance between residence and employment opportunities for residents. In this study, it is known that the distance of residence positively affects the opportunity for residents to work because the close distance between the place of residence and the office area will affect a person's chances of working. So that when someone lives in an urban area, their chances of working increase because the number of jobs available is more, and the qualifications or criteria for the workforce needed are also varied. When opportunities for work increase, the number of workers living in urban areas will increase.

Based on the regression results, the average coefficient of income for people with disabilities, namely -0.0091446, means that partially this variable has a negative effect and is not significant because the t value is 0.836 or more than 0.05. This means that the average income of people with disabilities has a negative and insignificant effect on the number of disabled workers in Indonesia, Denmark, France, and Ireland. The participation of persons with disabilities in the workforce is not affected by the average income of disabled workers.
Most choose to work not to get rich but to fulfill their daily needs to continue their lives. So that when they can work and earn an income, they will continue to work and collect their income. When their health condition as persons with disabilities decrease and the income saved for several years of work is felt to be sufficient, it causes them to choose to stop working because, as we know, the physical and health condition of persons with disabilities is lower than someone who is not a person with disabilities.

Simultaneously the variable number of people with disabilities who receive education, the variable number of people with disabilities living in urban areas, and the variable average income of people with disabilities affect the number of disabled workers in Indonesia, Denmark, France, and Ireland. Based on the R-Square value of 0.9804, it means that 98.04% of things that affect the number of disabled workers in Indonesia, Denmark, France, and Ireland can be explained by these three variables, namely the number of people with disabilities who receive education, the number of people with disabilities who live in urban areas, and the average income of people with disabilities. Furthermore, the remaining 1.96%, which affects the number of disabled workers in Indonesia, Denmark, France, and Ireland, is explained by other variables that are not in this model.

5. Conclusion

Based on the results of panel data regression using the fixed effect model approach in analyzing the effect of the independent variables on the dependent variable. So it can be concluded that the number of people with disabilities who receive education positively and significantly affects the number of disabled workers. Better compared to those with disabilities who do not receive education, so they choose to work to earn income even though they have physical limitations.

The variable number of disabled people living in urban areas has an effect on the number of disabled workers which means that every time the number of disabled people living in cities increases, the number of disabled workers also increases. Because people with disabilities who live in urban areas have easier access to public services such as health, education, and government services, those who live in urban areas have better living conditions than those who live in rural areas. So that people with disabilities who live in urban areas are better prepared to enter the workforce.

The average monthly income of people with disabilities has a negative and insignificant effect on the number of disabled workers. Because people with disabilities choose to work according to their health conditions, when their health condition can work, they will work to earn income to meet their daily needs. In contrast, when their body condition decreases due to limitations, they choose not to work.

The independent variables simultaneously affect the dependent variable in this study as evidenced by the R-Square value of the regression results, which is equal to 0.9804, meaning that 98.04% of things that affect the number of disabled workers in Indonesia, Denmark, France, and Ireland can be explained by these three variables, namely the number of people with disabilities who receive education, the number of people with disabilities who live in urban areas, and the average income of people with disabilities. Moreover, the remaining 1.96%, which affects the number of disabled workers in Indonesia, Denmark, France, and Ireland, is explained by other variables that are not in this model.
Suggestion

The results of this study suggest to the government that it is better to build education and health services that are evenly distributed in urban and rural areas for persons with disabilities because these two things affect their participation in the labor market and can improve their quality despite their limitations. As well as the government is optimizing and implementing these regulations to overcome the discrimination against persons with disabilities in the world of work. Because when people with disabilities can enter the workforce, the same as people who are not disabled, it can improve the economic conditions and living standards of people with disabilities, and this will affect the country’s economy because it can increase the country’s economic growth.

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Referensi


Undang-Undang Republik Indonesia Nomor 8 Tahun 2016 tentang Penyandang Disabilitas.

Undang-Undang Republik Indonesia Nomor 13 Tahun 2003 tentang Ketenagakerjaan

Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional