Submission received: 1st of September 2024
Revised: 15th of October 2024
Accepted: 21st of October 2024

# SHELTERED EMPLOYMENT WORKSHOPS VS. SUSTAINABILITY POLICY

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## Abstract

**Background and Objective:** The purpose of the article is to determine the rate of change of economic aspects related to social demand for the number of Sheltered Employment Workshops (SEWs) compared to the Commercial Labour Market (CLM), taking into account the needs of people with disabilities (PwDs) and sustainable development (SD).

**Materials and Methods:** Using linear regression for fluctuation, the most effective correlation coefficient between SEW funding opportunities and existing businesses in the CLM was determined. A CATI survey was conducted with a sample of N=103 PwDs who indicated a preference for their desired workplace and enterprise size.

**Results:** The survey showed that PwDs primarily want to work anywhere (*N*=31.07%). They strongly prefer to work in the CLM than in SEWs, avoiding discrimination. They are most willing to work for small, then large and micro companies (13.59%, 11.65%, 10.69%, respectively). Willingness to run their own business was declared by 9.71% of respondents.

**Practical implications:** In light of the pace of these changes, putting the preferences of PwDs into practice would promote a more efficient use of public resources. This also implies the possibility of the vocational activation of PwDs, and can be used in the creation of state and local government policies, and to achieve SD goals.

**Conclusions and Summary:** Social inclusion, economic development and sustainability must be combined. The preference of PwDs for diverse workplaces challenges conventional views and advocates for inclusive employment. Such a framework interweaves social well-being and sustainability, offering insights for policy makers and researchers working towards equitable and resilient societies.

**Keywords:** sustainability policy; social factor; sheltered employment workshops; disability; commercial labour market; knowledge management

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DOI: 10.19253/reme.2024.01.004

**JEL classification:** J1, J71, J82

**Paper type:** research study

## 1. Introduction

Disability is a global, complex and current challenge in the twenty-first century. It is found on all continents, in all countries of the world, whether developed, developing or poor. It is also one of the main issues in sustainable development (SD) policies, as knowledge sharing and management (KM) concerning this 'uncomfortable issue' should contribute to establishing equality and order in the world (WHO, 2023b).

Historically, the issue of disability can be found in the works of ancient Greece, where the proportions, beauty and perfection of the human body ruled. Any deviation from such an imperative was not sanctioned (Dowling, 2014). An example of the behaviour and policy applied to people with disabilities in those days is Sparta, where infants with physiological deviations were ruthlessly thrown off a cliff to certain death. At the same time, it should be emphasised that in ancient Babylon people were compensated for loss of health resulting in the inability to earn money, in the form of financial compensation. The penalty for a slave owner for depriving a slave of limbs was to pay the victim compensation for life, which was established in the Mesopotamian codes around 1700 BC (Mitchell, 2011).

Most countries rated in world rankings and considered developed should have economic systems that are also adapted to the needs of people with disabilities (Araten-Bergman & Stein, 2019, pp. 443-453). Unfortunately, the reality is often the opposite. An attempt was made to provide a permanent answer to this question in an article on the example of policy towards people with disabilities in Poland, where special-purpose institutions, called Sheltered Employment Workshops (SEWs), are dedicated as workplaces for people with disabilities (PwDs), as well as support from government institutions, such as the State Fund for the Rehabilitation of the Disabled (pl. PFRON) (Stankiewicz, 2015).

The global aspect of PwDs is addressed by the first three articles of the Universal Declaration of Human Rights of 1948 (10.12.1948), which guarantee:

(1) the inherent dignity and equality of all members of the human community (Article 1)
(2) no distinction of race, sex, language, religion, political opinion, nationality (Article 2)
(3) all rights of every human being, including life, liberty and security (Article 3) (United Nations, 2023a, 2023b).

Currently, in order to provide long-term support to people with disabilities, each country must allocate financial resources for this purpose. The impetus for

improving the socio-economic situation of PwDs by strengthening the integrity of European economies appeared thanks to the signing of the Treaties of Rome on 25.03.1957 (Van Gerven & Vandenbroeck, 2015). This issue is also addressed by Goal 8 of the Agenda for Sustainable Development (SD) – 2030, which aims to counteract the exclusion of people at risk of the lack of ability to work, including due to gender, social status or disability (ILO, 2023; United Nations, 2023a, 2023b).

In this study, the phenomenon of disability is presented as a multifaceted socio-economic aspect. The scale of legitimacy of the existence of the research problem has been shown in comparison with the population of able-bodied people in the selected EU country – Poland. The objective of the article is to determine the rate of change for economic aspects related to the social demand for the number of Sheltered Employment Workshops (SEWs) compared to the Commercial Labour Market (CLM) in Poland, taking into consideration the needs of pepople with disabilities, and the possibility of achieving the Sustainable Development Goals (SDGs).

From a social point of view, taking into account the factor of poor employment prospects and the low percentage in 2021 of the median of professional activity of PwDs in Poland: employed (16.8%), unemployed (0.7%) and economically inactive (82.5%), the legitimacy of supporting SEWs in the current scope began to be questioned: Perhaps establishments covered by public support, bearing the status of SEWs are no longer an attractive form of employment for people with disabilities? An attempt was therefore made to determine the rate of change regarding support for the policies of such companies and their actual number concerning the demand for labour in the CLM, as well as to verify the perceptions of PwDs of the government's sustainable development (SD) actions.

This study is structured as follows. Section 2 reviews the economic activity of people with disabilities in the EU and Poland, a research gap in access to data was indicated, and the economic, social and psychological effects of unemployment were defined. Section 3 includes the materials and methods of the study. Section 4 presents the results of the study. The discussion in Section 5 is connected with related studies and proposes an alternative for problem-solving that makes changes to the current process, organisational structure, and human resource allocation. Finally, Section 6 concludes the study.

## 2. Literature review

Labour market participation, regardless of a person's physical condition or type of exclusion is defined as participation in the process of social production, performing income-generating work, and is a globally important social issue (Gillberg, 2020; Kauffman, 2011; Marszałek, 2007; Rymsza, 2016; Söder, 1990; 1989; Finkelstein, 1980).

Economically inactive working-age or unemployed members of the population, who do not participate fully in society, often face a barrier of fading creativity and entrepreneurship. Furthermore, when budgets for services to assist people with disabilities are insufficient and inadequately managed, they place a burden on taxpayers and employers who contribute to the costs of these programmes. This problem assumes particular significance when considered in the context of the size of an enterprise, its capacity, revenue, expenditure, profitability or commitment to investment (Małecka, 2015). The largest number of people in employment work in the micro, small and medium-sized enterprise sector, which should fundamentally influence the policy of management of public funds in their favour (Małecka, 2021; 2018).

With regard to the discussed issue – the professional activity of people with disabilities – it is important to point out the effects of one of the most important macroeconomic factors encountered in the literature on the subject – unemployment and its dimensions: (1) economic, (2) social and (3) psychological, which affect both non-disabled people and people with disabilities who have been commissioned to work and who show a desire for professional activation. Revenues from taxes paid by these economic operators play a significant role in the budgets of all economies of the world. The costs, which include, for example:

1) social benefits
2) unemployment benefits
3) allowances paid to the poor and to those with deteriorating living conditions
4) housing funds supporting the unemployed
5) psychological consultations for those chronically looking for a job
6) courses enabling professional development and maximising the rate of people who want to be among the professionally active,

directly imply an increase in the amounts intended for:

1) government and social administration
2) local law enforcement services related to inhibiting socially undesirable phenomena, such as crime or theft
3) social welfare centres
4) rehabilitation centres
5) centres supporting the change or quality of professional qualifications
6) companies supporting social housing.

All supporting institutions are funded from the state budget using the direct or indirect redistributive function of public finances, i.e. they concern and burden every citizen, and every citizen is an elementary link in the economic system, which – regardless of the level of efficiency of the taxpayer – is the basic source of public finances (Figure 1).

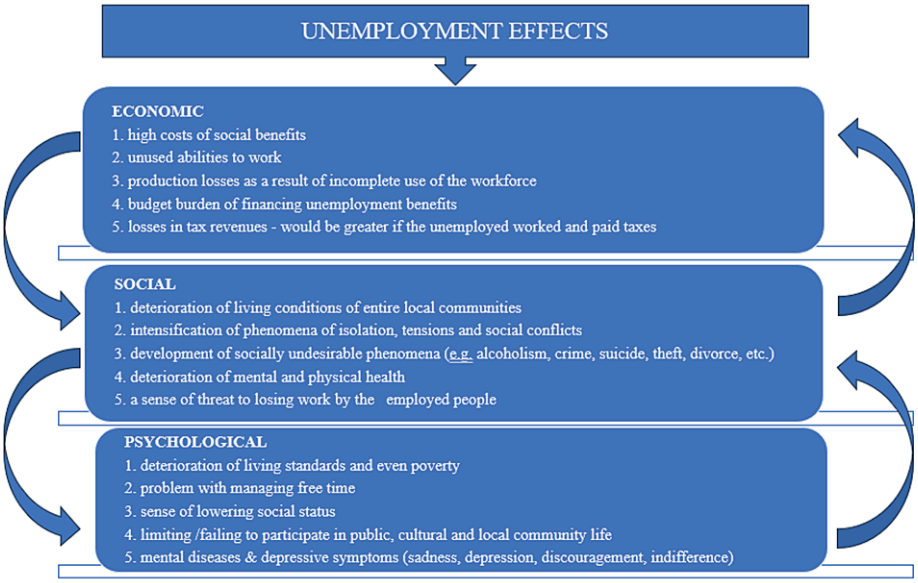


**Figure 1.** Economic, social and psychological effects of unemployment
*Source*: own elaboration (see also: Małecka, 2022; Czerkawski, et al., 2021).

The consequences of remaining unemployed for a prolonged period have further effects that very often begin to overlap (Czerkawski, Małecka, 2022; Hoopengardner, 2001). This macroeconomic factor has taken on a new significance in view of the current reality, which in the studied region is influenced not only by post-Covidian and economic conditions and changing consumer expectations, but also by the war in Ukraine, which is changing the face of the labour market in Poland (Smith, 2022).

EU reports on people with disabilities in the European Union indicate the number of employed people, which does not exceed an employment rate of 50.1% for people with disabilities, of whom 12.2%-19.6% are registered as unemployed in 2004–2021. In comparison, Poland obtained results on average 4.7% lower in the analysed period, of which the lowest difference of 1.8% was recorded in 2021 and the highest of 7.3% in 2006 (% respectively: 50.1–48.3=1.8; 41.0–33.7=7.3) (Table 1).

The issue of jobs for people with disabilities is a complex and problematic issue at the European Union (EU) level, as the share of economically active people with disabilities is still significant compared to the populations of the world's economies. People with disabilities who do not register are consistently above 30%. No homogeneous trend can be identified in terms of: either employed, not employed but registered as unemployed or not employed and not registered as unemployed, although the extremes reached are $\left|0.1\%\text{-}1.5\%\right|$ in absolute terms (Małecka, Czerkawski, Weber, 2021).

**Table 1.** The rate of changes in the economic activity of People with Disabilities (PwDs) in the EU and Poland in 2004–2021 [%]

| Year | PwDs in EU [%] | | PwDs in Poland [%] | |
|---|---|---|---|---|
| | Employment | Unemployment | Employment | Unemployment |
| 2004 | 39.3 | 19.6 | 32.4 | 23.2 |
| 2006 | 41.0 | 18.3 | 33.7 | 22.5 |
| 2008 | 42.4 | 16.6 | 36.2 | 21.4 |
| 2010 | 43.7 | 17.2 | 38.2 | 20.1 |
| 2012 | 44.3 | 17.6 | 39.0 | 19.9 |
| 2014 | 44.6 | 16.8 | 39.9 | 18.8 |
| 2016 | 46.1 | 15.6 | 42.0 | 15.5 |
| 2018 | 48.1 | 13.7 | 44.8 | 12.4 |
| 2020 | 49.5 | 13.0 | 47.2 | 11.5 |
| 2021 | 50.1 | 12.2 | 48.3 | 10.5 |
| 2022 | no available data | | | |

Note: Eurostat, the statistical office of the European Union, the employment rate of people with disabilities (aged 20–64) in the EU-27.

*Source*: own collaboration based on Eurostat, March 2024.

The Polish population is about 0.49% of the world's population (2023: 7.7 billion versus about 38 million, data form 2024: 8.2 billion). According to the WHO, there are about 1.1 billion PwDs throughout the world, which is about 15% of the world's total population (WHO, 2023a). In Poland, the collection of population data is carried out by state authorities in the form of regular and public statistics. The issue of disability and professional activity as a social factor is also included in the forms of each National Census (*pl. Narodowy Spis Powszechny, NSP*). The information gap in Poland regarding the number of PwDs in periods not covered by the NSP is filled by survey questions and annual reports of the State Fund for the Rehabilitation of Disabled Persons (*pl. Państwowy Fundusz Rehabilitacji Osób Niepełnosprawnych, PFRON*), which illustrates the scale of economic activity of Polish society. This is expressed by the median (midpoint value) of a given year, i.e. the value of the middle data point in an ordered sequence of numbers, in this case, for the number of reported observations in a given year (the so-called second quartile, Mdn) in the nominal value (determining the so-called cut-off point) for employed and unemployed PwDs (Figure 2).

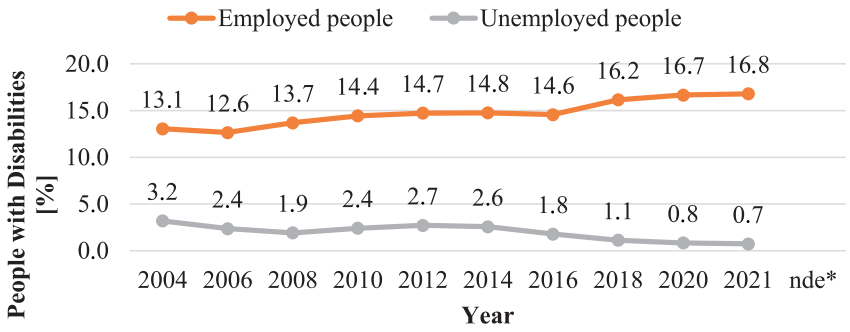


**Figure 2.** The economic activity median of PwDs from 2004–2021

*nde – no data available.

*Source*: own research based on BPRSON, March 2023.

This method allows a value to be obtained from the sample which is a consistent and unburdened (asymptotic) estimator of the expected value in the study population. In addition, it is resistant to the occurrence of outliers in the sample and is applicable in the case of ordinal variables for which the value determines the average level of a given variable (because there is no arithmetic mean for variables of this nature). The second quartile divides the number of observations into two theoretically equal sets of observations, in which the same number of observations should occur.

Sheltered employment workshops (SEWs) are facilities that provide employment and training opportunities for people with disabilities who may face challenges in obtaining and maintaining employment in traditional workplaces. These workshops typically provide a range of work activities, including assembly, packaging and light manufacturing, as well as support services such as job coaching, transportation and counselling. SEWs are designed to help individuals with disabilities gain job skills, work experience and self-confidence while earning a pay check. The goal of these workshops is to help participants transition into integrated, competitive employment in the community whenever possible. Some workshops may also provide vocational training, such as computer skills, communication skills and other job-related skills (Durocher, Gagné, Roy, 2018; Gallimore, Stow, 2017).

It is important to note that sheltered employment workshops have faced criticism in recent years, as some advocates argue that they perpetuate the segregation of people with disabilities from the mainstream workforce. As a result, many workshops have shifted their focus towards providing training and support for integrated employment opportunities in the community (Czerkawski, Małecka, 2022).

## 3. Research Methodology

The paper used secondary public data from 2004–2021 provided on government institution web sites (which can be found in Supplementary Appendix A). The analysis of changes in Sheltered Employment Workshops (SEWs) was done with numerical ranges – over 18 analysed years (12 samples in each year) – in relation to the number of people with disabilities employed in them, in order to determine the rate of change for economic aspects related to the social demand for the number of SEWs compared to the Commercial Labour Market (CLM) in Poland, taking into consideration the needs of people with disabilities, and the Sustainable Development Goals (SDGs).

In the proposed Model A, n=10 signifies the observations used including time series in subsequent years: 2004, 2006, 2008, ..., 2020, 2021. The average value for each year was used. In order to obtain the results of my own research presented in this paper, the principle of linear regression analysis (SEW and CLM) was used in the model, determining the directional coefficients (a_SEW, a_CLM), and the coefficients (b_SEW, b_CLM).

Hence, the year of Polish accession to the European Union was taken as the base year of the survey. Assuming the existence of linearity and attempting to study this, a relationship of the type: $f(x) = ax + b$ is verified, giving the possibility of a certain freedom to choose a specific function through the value of the directional coefficient a and the free coefficient b. The appropriate selection of parameters allows the proposed function formula to be matched to the data, but only inside the model.

Next, the results of an empirical study were presented, aimed at confirming the correctness of the developed Model A, conducted on the basis of a questionnaire addressed to people with disabilities. For this purpose, $N=103$ survey interviews were conducted, in which single and multiple-response questions using a 7-point Likert scale and indicators used in social sciences at the level of significance $\alpha=0.05$ were used to obtain the results. The survey was conducted in October and November, 2021.

The strength of the presented methodology is the knowledge management for the carefully prepared questionnaire based on the authors' long-term experience of economic trends in connection with the state policy aimed at activating PwDs, and used by them in practice. The respondents of the study could express their opinion focusing on the factors determining their needs and the possibility of achieving Sustainable Development Goals (SDGs). The weak point of the presented methodology could be the lack of open-ended questions.

## 4. Results and Discussion

According to the dataset (see: Appendix A), Model A was created (Table 2, Figure 3).

**Table 2.** Model A of economic activity changes among people with disabilities (PwDs) working in SEWs and the CLM in Poland from 2004–2021

| No. | Observation | PwDs worked in | |
|---|---|---|---|
| | | SEW | CLM |
| 1 | 2004 | 181 718 | 23 887 |
| 2 | 2006 | 173 685 | 35 527 |
| 3 | 2008 | 166 089 | 39 115 |
| 4 | 2010 | 194 127 | 65 613 |
| 5 | 2012 | 165 639 | 75 394 |
| 6 | 2014 | 149 271 | 95 998 |
| 7 | 2016 | 123 353 | 129 541 |
| 8 | 2018 | 113 227 | 144 607 |
| 9 | 2020 | 94 132 | 141 939 |
| 10 | 2021 | 90 005 | 142 036 |
| 11 | 2022 | no data available | |
| 12 | Average value | 145 124 | 89 366 |
| 13 | Median value | 157 455 | 85 696 |
| 14 | Max value | 194 127 | 144 607 |
| 15 | Min value | 90 005 | 23 887 |

*Source*: own research based on Appendix A.

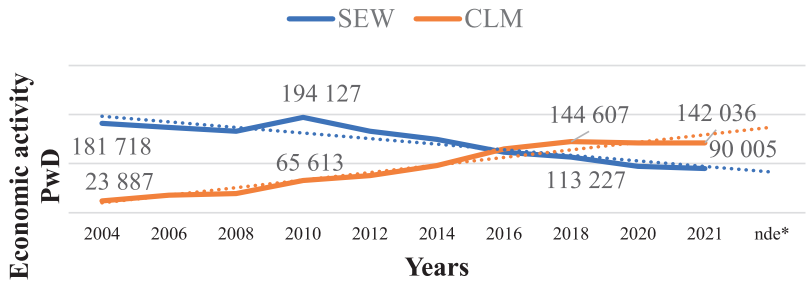


**Figure 3.** Linear regression for the economic activity of PwDs for SEW and CLM from 2004–2021

*nde – no data available.

*Source*: own research based on Table 2.

The parameters of Model A are present in Table 3 and the trends in Table 4 (Tables 3 and 4).

**Table 3.** Model A parameters

| Par. | coefficient (a) | coefficient (b) | $R^2$ |
|---|---|---|---|
| SEW | –11 365.000 | 207 634.000 | 0.848 |
| CLM | 15 443.000 | 4 429.800 | 0.949 |

*Source*: own research.

**Table 4.** Model A trends

| Observation /Year | SEW | Deviation [number] | Trend [%] | CLM | Deviation [number] | Trend [%] |
|---|---|---|---|---|---|---|
| 2004 | 181 718 | 0 | 100.000 | 23 887 | 0 | 100.000 |
| 2006 | 173 685 | –8 033 | –4.625 | 35 527 | 11 640 | 32.764 |
| 2008 | 166 089 | –7 596 | 0.212 | 39 115 | 3 588 | 3.006 |
| 2010 | 194 127 | 28 038 | 0.031 | 65 613 | 26 497 | 1.214 |
| 2012 | 165 639 | –28 488 | –0.005 | 75 394 | 9 781 | 0.157 |
| 2014 | 149 271 | –16 368 | 0.001 | 95 998 | 20 604 | 0.034 |
| 2016 | 123 353 | –25 919 | 0.000 | 129 541 | 33 543 | 0.009 |
| 2018 | 113 227 | –10 126 | 0.000 | 144 607 | 15 066 | 0.001 |
| 2020 | 94 132 | –19 094 | 0.000 | 141 939 | –2 668 | 0.000 |
| 2021 | 90 005 | –4 128 | 0.000 | 142 036 | 97 | 0.000 |
| 2022 | no data available | | | | | |

*Source*: own research.

In order to verify the direction of the calculated correlation, a survey was conducted among the members of the "Outstanding" Association (pl. Nieprzeciętni) on a sample of 103 respondents – PwDs – in order to verify the economic and social interests in terms of the "attractiveness" of SEWs and the CLM.

Among the PwD study population, there were 48 women and 55 men. The largest number of respondents, 46.6%, live in a city of over 150,000 and 64.1% of respondents with disabilities have a university degree. 79.6% of respondents are people with physical disabilities and 2.9% with mental disabilities. 71.84% of re-

spondents benefited from state subsidies. Slightly above half – 50.49% have migrated in their lives in search of work. Own research showed that among the respondents, SEWs (3.88%) are not an attractive form of professional activity (Figure 4).

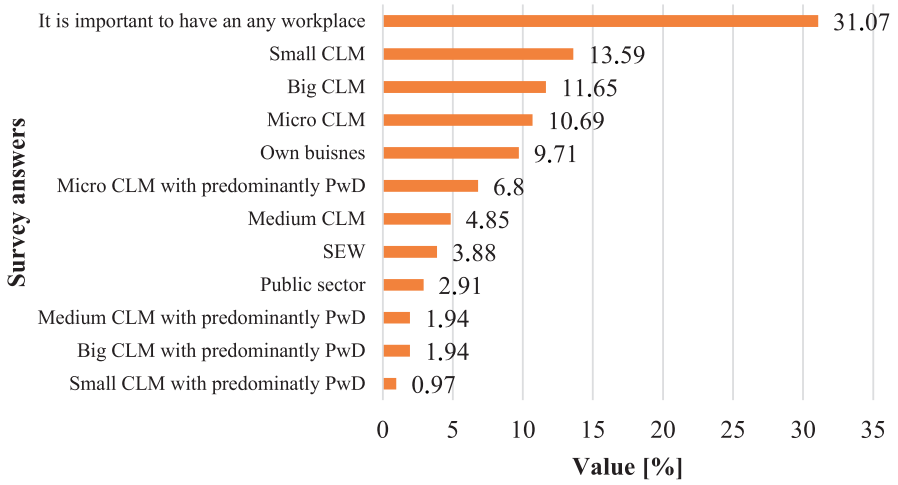


**Figure 4.** Preferred type of enterprise: SEW or CLM [%].

Note: Micro: 1 to 9 employees, Small: 10 to 49 employees, Medium: 50 to 249 employees, Big: 250 to 500 employees, Own business: 1 person – owner, "predominantly" means more than 50%.

*Source*: own research.

Respondents who are 100% PwDs would like – first of all – to have the opportunity to access any labour market: It is important to have any workplace (31.07%). Subsequently, they choose commercial enterprises: CLM: 40.78% as opposed to SEW: 3.88%; taking into account the size of the enterprise in the following order – Small: 13.59%, Big: 11.65%, and Micro: 10.69%.

## 5. Results and Theory

Based on the linear regression, there exists the possibility to determine the economic activity of PwDs for SEWs and the CLM from 2004–2021, according to Model A. In this study, presenting a Polish market case, the rate of change for economic aspects related to the social demand for the number of Sheltered Employment Workshops (SEWs) was observed with a decreasing tendency. This is indicated by the calculated directional coefficient a_SEW = –11 365.000, as against a_CLM = = 15 443.000. It can also be used to predict the needs of PwDs outside the study period 2004–2021 by using $f(x) = ax + b$. Based on the trends, a decreasing tendency

(101.90%) was observed for SEWs in the whole analysed period from 2004–2021, according to Model A, excluding the year 2010.

The economic theory of Sheltered Employment Workshops in Poland, according to current regulations, states that an entrepreneur must:

— run a business for at least 12 months
— employ no fewer than 25 full-time employees, and
— ensure that at least 50% of the total employees are people with disabilities (PwDs) (PFRON, 2023).

Summarising, from an economic point of view, it is more profitable to give up the status of a protected employment enterprise, to be a commercial enterprise (CLM) – which is in line with the calculated and presented Model A.

According to the literature review, people with disabilities who are economically active in the labour market more often choose the Commercial Labour Market, against the protected one (Czerkawski, Małecka, 2022, pp. 387–407). The empirical research also found that PwDs who are economically active in the labour market more often choose the CLM: 40.78%, against the protected one: 3.88% (SEW). Even when the survey answers were summarised – suggesting that the chosen enterprise (Micro, Small, Medium, Big) can have an SEW status, e.g. "predominantly" and has more than 50% PwDs (according to SEW regulations) – the value of 11.65% differs by: –29.13% from the one obtained.

## 6. Implications for Practice

The first suggestion is to indicate implications for practice, the government institutions in Poland should give good practice examples for the CLM by supporting the activation of employment for people with disabilities, raising the employment rate of PwDs in their public offices. This could cause a snowball effect (Ghemawat, 1990, pp. 335–351). Personal needs should be identified for people with disabilities in order to evaluate and create better living conditions, and aid integration with society as active individuals in a dynamically changing economic environment (Czerkawski et al., 2021, pp. 163–186).

Most economic activity simulation studies of Sheltered Employment Workshops use generic performance indicators to measure and compare their performance based on government institution data in Poland. Mostly, political decisions are made without prior consultations with entrepreneurs at both SWEs and the CLM taking into account especially the good of PwDs by the goals of sustainable development, such as:

SDG 1: No poverty
SDG 3: Good health and well-being
SDG 8: Descent work and economic growth

SDG 10: Reduced inequalities (see also: Atkinson, Dietz, Neumayer, Agarwal, 2014; Wu, Lo, Ng, 2019).

Modelling the economic activity of people with disabilities, including the demand for Sheltered Employment Workshops, scholars of calculated and presented studies should at first listen to the community to which support is dedicated: according to the research: 53.40% preferred the CLM (including Own business: 9.71% and the Public Sector: 2.91%), and 15.53% chose SEWs (including predominantly PwDs in the CLM: 11.65%, and SEWs: 3.88%), while 31.07% of respondents did not give a preference, because for them it is important to have any workplace (see Figure 4).

It is also important to continue investigating and follow the European Union regulations, and if necessary, change the model of support. The study identified the period after 2004 as the period in which a downward trend in the economic activity of people with disabilities in SEWs was observed (Figure 3) (see also Czerkawski, Małecka, 2022 It is important to examine further research and to follow the global socio-economic trend (Małecka, Czerkawski, Weber, 2021).

## 7. Conclusion

Disability issues have always existed. However, it was not until the 20th century that they became noticed, when public funding of social and psychological factors implying economic effects, began to be considered. Sheltered Employment Workshops (SEWs), which use state aid to employ people with disabilities (PwDs) and offer a protection package, are becoming less and less attractive to those directly concerned, as evidenced by the downward trend in SEWs over the years 2004-2021. This is confirmed by the indicated coefficient which is the subject of own research. Its negative value clearly illustrates the direction of the trend among the studied population: negative growth.

The research presented in the paper – on the basis of data collected over 18 years (2004-2021) – led to the construction of Model A, determined using the coefficient of change of individual mean value – medians – from each analysed year. This allowed for the anticipation of the number of SEWs, depending on the number of professionally active PwDs who definitely prefer to work in the Commercial Labour Market (CLM).

The R-squared factor was a measure of the quality of the presented model which was: 0.848 for SEW, and 0.949 for CLM. Its designation and analysis indicate what percentage of one variable explains the variable. According to the presented analysis, a very good fit occurs, which means that the chosen dependence is correct and important in terms of social and sustainable development. The coefficient b itself can help to determine the tendencies of these people in choosing their career path, and can also be helpful for the government, local governments and local institutions in creating policies regarding the support of PwD entrepreneurship in general and

SEW participation in the public budget. SEWs are now perceived as enterprises in which there is social isolation of the people employed in them.

The existence of an inversely proportional relationship between the number of employees (PwDs) in the commercial labour market and sheltered employment workshops, and the existence of a correlation between an increasing number of people with disabilities active in the CLM and a decreasing number in SEWs were also proven. The presented results determine the further direction of the research because in order for the recommendations to be complete, in-depth interviews should be conducted among the interested parties themselves, i.e. direct surveys should be conducted among PwDs active on both markets – SEW and CLM – trying to find answers to questions regarding the perception of both markets of potential professional activity, both in terms of possible opportunities, and of barriers and threats occurring to them, which are the determinant of PwDs deciding on the choice of labour market.

The presented research results may contribute to broadening knowledge about the condition of the labour market of a group of people who are still not an integrated part of the community and the management of this knowledge (KM) – to support PwDs who are experiencing the positive impact of sustainable development (SD) principles in Poland, but still at an unsatisfactory level. The study also contributes to the opening of a multidisciplinary discourse on the possibilities of the professional activation of people with disabilities, which can serve not only to disseminate knowledge in this area, but also to foster cooperation between theory and practice.

The application goal of the presented study may be consistent with the 2030 Agenda. The results of the research presented in this article provide a basis for creating a sustainable state policy in Poland and for achieving the global goals of Agenda 2030 (in particular: SDG 1, SDG 3, SDG 8, SDG 10) more quickly. The consequence of such action will be strengthening the message of the environment of people with disabilities to improve their socio-economic situation and bring it in line with the standards prevailing in other European Union countries.

In this paper, a broad spectrum of issues related to the disability aspect of the labour market was presented. The suggestions for future research are to:

— extend the research group of study
— compare various SEM enterprise industry segments on the employment of people with disabilities
— extend the research to other economic areas in Poland and the EU
— apply this study in other countries and compare the results.

For this purpose, to attain the future research data, the MARS (Multivariate Adaptive Regression Splines) method could be used, which is a much more powerful tool than linear regression, and artificial neural networks (ANNs).

## 8. Limitations of the Study

This research has certain limitations. The case study demonstrates that a key factor in predicting the economic aspects related to societal demand for the number of Sheltered Employment Workshops (SEWs) in the Commercial Labour Market (CLM), which would be implemented in accordance with the principles of Sustainable Development (SD) and address the expectations of people with disabilities (PwDs), may involve the use of modelling techniques. As indicated in the study, a linear regression tool can forecast the demand for SEWs in the CLM. However, the design of the case study limits the generalisability of the findings, as it is based on a single case focusing on directional coefficients (a_SEW, a_CLM) and intercepts (b_SEW, b_CLM) within the specified Model A. Therefore, future studies may benefit from applying more advanced methodologies, such as MARS (Multivariate Adaptive Regression Splines), which is recognised as a more robust tool than linear regression (see: Nalcaci, Özmen, Weber, 2019).

This survey study exclusively focuses on people with disabilities, using a representative sample of 103 respondents to gain insights into their workplace preferences. There is a need to extend the scope of this research to a larger population of individuals with disabilities in order to enhance the reliability of the quantitative data.

It is also essential for future research to explore the potential benefits of employing people with disabilities, which may arise at various levels—personal, corporate and national. Below, the positive implications for each of these levels are outlined, emphasising how such benefits can contribute to both individual well-being and societal progress, and suggesting directions for future research.

### 8.1. Benefits for Individuals with Disabilities

Participation in the labour market offers numerous advantages for individuals with disabilities. Primarily, employment facilitates increased personal activity and greater autonomy. By engaging in work, individuals experience more frequent social interactions, mental stimulation and a sense of purpose, which are crucial for fostering self-esteem and psychological well-being.

Additionally, employment contributes to financial independence by generating income from personal labour, enabling individuals with disabilities to secure a stable source of income and reduce reliance on external financial support. This financial autonomy can improve their standard of living and access to essential resources, thereby enhancing their overall quality of life.

Employment also has positive effects on health outcomes. Regular work participation encourages physical and mental activity, which can lead to improved physical fitness and psychological resilience. Studies show that employed individuals tend to report better emotional well-being and lower incidences of mental health disorders, such as depression and anxiety, compared to their unemployed counter-

parts. Employment acts as a buffer against the emotional stress associated with unemployment and social isolation. Moreover, evidence suggests that individuals with disabilities who are employed often experience accelerated rehabilitation, facilitated by a structured routine and opportunities for personal development.

## 8.2. Benefits for Companies

For businesses, employing individuals with disabilities can yield significant organisational advantages. A key benefit is the lower employee turnover rate, frequently observed among workers with disabilities. Research indicates that individuals with disabilities exhibit a greater degree of loyalty and dedication to their workplace, thereby reducing costs associated with the recruitment, onboarding and training of new staff.

Additionally, companies that hire individuals with disabilities often foster stronger internal relationships and promote a culture of inclusivity. Such an environment enhances employee morale and team cohesion, and elevates the company's corporate social responsibility (CSR), a key factor in today's business environment. Diversity in the workforce, including the inclusion of people with disabilities, is increasingly seen as an asset that fosters innovation and creative problem-solving.

Moreover, companies benefit from an enhanced public image by showcasing their commitment to diversity and inclusion, which can improve their reputation and competitiveness in the marketplace. Employing people with disabilities can positively influence customer loyalty and attract new clientele, especially those who value socially responsible business practices.

## 8.3. Benefits for the State

At the national level, the employment of individuals with disabilities brings substantial economic and social benefits. From a fiscal perspective, integrating individuals with disabilities into the workforce reduces the burden on social welfare systems, including disability benefits and social assistance programmes. Employed individuals contribute to the economy through tax payments, thereby increasing state revenues and reducing reliance on public resources.

Furthermore, employed individuals with disabilities tend to require fewer medical interventions and healthcare resources due to better physical and mental health. This leads to a reduction in healthcare expenditures, as there are fewer hospital visits and a reduced need for chronic disease management. Employment plays a pivotal role in fostering faster physical rehabilitation and maintaining emotional stability, which in turn decreases long-term healthcare costs associated with disability management.

In conclusion, the employment of individuals with disabilities provides multifaceted benefits, contributing not only to the personal empowerment of individu-

als, but also to the organisational success of companies and the overall economic well-being of the state. These positive outcomes highlight the importance of promoting inclusive employment practices across all sectors of society. Moreover, the coefficient identified in the study provides valuable insight into directing appropriate financial resources to forecast the economic aspects related to societal demand for Sheltered Employment Workshops (SEWs) in the Commercial Labour Market (CLM), in alignment with Sustainable Development (SD) principles and the expectations of people with disabilities (PwDs).

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## Appendix A

| No. | SEW | CLM | No. | SEW | CLM | No. | SEW | CLM | No. | SEW | CLM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 177 309 | 15 289 | 55 | 167 249 | 39 059 | 109 | 160 549 | 80 327 | 163 | 126 151 | 139 956 |
| 2 | 182 070 | 19 793 | 56 | 166 665 | 38 308 | 110 | 162 551 | 80 164 | 164 | 126 164 | 139 791 |
| 3 | 183 816 | 22 726 | 57 | 167 224 | 39 349 | 111 | 164 333 | 79 882 | 165 | 126 019 | 141 393 |
| 4 | 185 973 | 25 608 | 58 | 166 739 | 39 773 | 112 | 164 355 | 80 581 | 166 | 123 931 | 139 603 |
| 5 | 186 416 | 25 931 | 59 | 165 120 | 38 888 | 113 | 165 417 | 81 419 | 167 | 122 846 | 138 547 |
| 6 | 187 009 | 26 352 | 60 | 163 794 | 39 241 | 114 | 166 541 | 82 048 | 168 | 122 453 | 138 479 |
| 7 | 184 814 | 25 640 | 61 | 181 971 | 44 728 | 115 | 167 041 | 82 763 | 169 | 118 834 | 139 591 |
| 8 | 182 870 | 25 701 | 62 | 182 702 | 46 947 | 116 | 167 338 | 83 093 | 170 | 116 106 | 143 271 |
| 9 | 180 896 | 23 894 | 63 | 183 146 | 47 856 | 117 | 168 083 | 83 864 | 171 | 116 052 | 143 722 |
| 10 | 179 155 | 23 663 | 64 | 182 387 | 49 188 | 118 | 168 487 | 85 006 | 172 | 114 542 | 144 089 |
| 11 | 177 690 | 23 914 | 65 | 183 017 | 49 985 | 119 | 168 164 | 85 466 | 173 | 114 508 | 144 575 |
| 12 | 172 597 | 28 130 | 66 | 183 428 | 51 203 | 120 | 166 862 | 85 142 | 174 | 114 175 | 145 471 |
| 13 | 170 914 | 26 020 | 67 | 185 010 | 52 222 | 121 | 161 589 | 85 676 | 175 | 113 204 | 145 542 |
| 14 | 172 706 | 28 499 | 68 | 185 980 | 53 259 | 122 | 161 061 | 87 063 | 176 | 112 417 | 145 056 |
| 15 | 172 110 | 28 781 | 69 | 187 107 | 54 862 | 123 | 160 245 | 88 133 | 177 | 111 394 | 146 082 |
| 16 | 172 226 | 29 906 | 70 | 187 558 | 56 753 | 124 | 151 976 | 92 245 | 178 | 110 841 | 146 482 |
| 17 | 171 254 | 30 102 | 71 | 188 418 | 57 335 | 125 | 149 818 | 93 522 | 179 | 109 441 | 146 072 |
| 18 | 171 568 | 30 715 | 72 | 188 704 | 58 444 | 126 | 148 234 | 96 218 | 180 | 107 205 | 145 331 |
| 19 | 171 531 | 30 136 | 73 | 188 007 | 59 507 | 127 | 145 509 | 98 760 | 181 | 104 697 | 145 495 |
| 20 | 172 645 | 31 180 | 74 | 189 657 | 61 314 | 128 | 144 646 | 99 835 | 182 | 104 256 | 146 244 |
| 21 | 173 434 | 31 539 | 75 | 190 565 | 63 298 | 129 | 143 960 | 101 157 | 183 | 103 645 | 147 442 |
| 22 | 174 097 | 32 241 | 76 | 191 530 | 64 630 | 130 | 142 989 | 102 211 | 184 | 103 391 | 147 478 |
| 23 | 173 804 | 32 086 | 77 | 193 300 | 65 535 | 131 | 141 826 | 103 117 | 185 | 103 482 | 146 958 |
| 24 | 173 885 | 32 902 | 78 | 194 553 | 66 571 | 132 | 139 403 | 104 037 | 186 | 103 403 | 147 569 |
| 25 | 170 430 | 32 163 | 79 | 195 849 | 67 739 | 133 | 133 125 | 106 839 | 187 | 103 027 | 147 215 |
| 26 | 172 446 | 33 344 | 80 | 195 226 | 67 005 | 134 | 132 706 | 109 496 | 188 | 102 007 | 146 448 |
| 27 | 172 894 | 33 948 | 81 | 196 856 | 67 183 | 135 | 132 235 | 110 743 | 189 | 101 661 | 146 815 |
| 28 | 172 953 | 34 422 | 82 | 197 814 | 67 306 | 136 | 130 573 | 112 487 | 190 | 100 769 | 147 688 |
| 29 | 173 611 | 34 752 | 83 | 197 928 | 68 257 | 137 | 128 631 | 113 957 | 191 | 100 219 | 146 920 |
| 30 | 173 755 | 35 622 | 84 | 198 234 | 69 007 | 138 | 128 258 | 114 477 | 192 | 99 879 | 145 828 |
| 31 | 173 566 | 35 782 | 85 | 193 001 | 69 903 | 139 | 127 377 | 116 165 | 193 | 98 451 | 143 899 |
| 32 | 174 134 | 36 418 | 86 | 193 059 | 71 257 | 140 | 126 610 | 117 613 | 194 | 97 787 | 145 235 |
| 33 | 175 123 | 36 663 | 87 | 171 272 | 65 220 | 141 | 125 933 | 119 383 | 195 | 97 118 | 143 660 |
| 34 | 175 826 | 37 396 | 88 | 171 545 | 65 752 | 142 | 126 024 | 120 105 | 196 | 94 812 | 138 806 |
| 35 | 175 372 | 37 845 | 89 | 172 224 | 66 194 | 143 | 125 267 | 121 028 | 197 | 92 516 | 139 158 |
| 36 | 174 105 | 37 968 | 90 | 173 275 | 67 638 | 144 | 124 467 | 121 611 | 198 | 92 678 | 141 381 |
| 37 | 175 763 | 38 497 | 91 | 173 754 | 68 722 | 145 | 122 250 | 122 475 | 199 | 92 828 | 142 434 |
| 38 | 176 389 | 39 694 | 92 | 173 726 | 69 558 | 146 | 123 106 | 123 917 | 200 | 92 576 | 142 328 |
| 39 | 177 217 | 40 349 | 93 | 173 090 | 70 213 | 147 | 123 405 | 124 865 | 201 | 93 469 | 141 767 |
| 40 | 177 588 | 40 689 | 94 | 173 288 | 71 054 | 148 | 123 343 | 125 470 | 202 | 93 073 | 142 096 |
| 41 | 177 621 | 40 926 | 95 | 173 335 | 71 394 | 149 | 123 065 | 126 563 | 203 | 92 271 | 141 727 |
| 42 | 178 370 | 41 443 | 96 | 173 815 | 71 688 | 150 | 122 664 | 127 825 | 204 | 92 010 | 140 774 |
| 43 | 178 490 | 41 061 | 97 | 166 656 | 72 203 | 151 | 122 886 | 132 575 | 205 | 91 106 | 139 870 |
| 44 | 179 170 | 41 617 | 98 | 167 786 | 71 643 | 152 | 123 406 | 132 459 | 206 | 91 318 | 140 615 |
| 45 | 179 162 | 40 703 | 99 | 168 126 | 71 222 | 153 | 123 381 | 133 761 | 207 | 91 487 | 141 296 |
| 46 | 180 297 | 41 875 | 100 | 168 131 | 71 099 | 154 | 124 157 | 134 610 | 208 | 90 757 | 141 370 |
| 47 | 178 739 | 42 200 | 101 | 167 871 | 71 143 | 155 | 124 354 | 134 768 | 209 | 90 197 | 142 645 |
| 48 | 178 796 | 42 188 | 102 | 169 141 | 71 485 | 156 | 124 217 | 135 200 | 210 | 90 255 | 143 251 |
| 49 | 162 842 | 37 985 | 103 | 162 967 | 77 840 | 157 | 125 048 | 139 072 | 211 | 89 773 | 143 462 |
| 50 | 165 422 | 39 304 | 104 | 163 161 | 78 105 | 158 | 126 541 | 137 307 | 212 | 89 581 | 142 730 |
| 51 | 166 248 | 39 598 | 105 | 163 469 | 78 792 | 159 | 125 048 | 139 072 | 213 | 89 307 | 142 493 |
| 52 | 166 317 | 39 665 | 106 | 163 540 | 80 196 | 160 | 126 997 | 137 546 | 214 | 89 115 | 142 626 |
| 53 | 167 935 | 39 000 | 107 | 163 701 | 80 505 | 161 | 126 744 | 137 990 | 215 | 88 708 | 142 428 |
| 54 | 167 511 | 39 213 | 108 | 163 118 | 80 493 | 162 | 126 511 | 138 866 | 216 | 88 455 | 141 646 |

*Źródło*: Own elaboration based on government reports from various years.