

Efficiency of Chosen Labor Market Programs for Disadvantaged Groups in Slovakia

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Abstract: Despite extensive research on labor market programs, there is limited information on the effectiveness of current unemployment schemes targeting disadvantaged job seekers. A literature review reveals that labor market programs are generally viewed positively, with employment services deemed effective in terms of their impact on the unemployed or cost-effectiveness. This study examines the effectiveness of labor market programs implemented in the Slovak Republic from 2019 to 2023. These programs aimed either to create job opportunities directly or to provide counselling services to the long-term unemployed. The analysis utilized data from the Ministry of Labor, Social Affairs and Family, and the Office for Employment and Social Affairs, focusing on unemployed individuals who participated in programs targeting disadvantaged job seekers. Based on propensity score matching, participants in the programs were compared with non-participants during the specified period. The findings indicate that participation in a program does not affect the duration of long-term unemployment, which is primarily influenced by education and residence. However, the selected programs demonstrated a positive impact on participants, particularly in the long term.

Keywords: Active Labor Market Policy, Labor Market Program, Disadvantaged Groups, Unemployment

Introduction

The issue of disadvantaged applicants and vulnerable groups is growing in importance as the number of job seekers that fall into the category of disadvantaged groups seems to grow each year. This is especially true for the labor market in Slovakia, where more than half of the jobseeker fall into the category of vulnerable group. The disadvantaged applicant is, by law, anyone who either is long-term unemployed, older than 50 years of age, young unemployed up to 29 years of age, or anyone who has a health condition which does not enable them to have a full-time job.

Considering the focus of the work, we will look more closely at active measures of the labor market. Active labor market measures are tools which support the unemployed to return to the labor market. These are instruments such as education and training, employment incentives, sheltered and supported employment and rehabilitation, direct job creation and business start-up incentives, targeting the unemployed and closely related groups such as the inactive who would like to work or the employed, who are at a known risk of involuntary job loss.

In Slovakia, in the years 2019-2023, several labor market programs were designed to especially help disadvantaged applicants get back into the labor market. This paper will focus on these programs:

“Increased activity towards employment”

“Be active and get a job”

“Counselling support for long-term unemployed”

“Reconciliation of family and work life”

“Path to the labor market”

“Path to the labor market II”

“Path to the labor market III”

All of them had a condition for the applicants to meet one of the criteria to be disadvantaged applicants. The main criteria for the applicants to join one of the above-mentioned programs was to be a part of one disadvantaged groups.

The program was based on either consulting services, wage subsidies or direct employment to help the especially long-term unemployed return to the labor market.

The aim is, therefore, to assess whether participation in a program can shorten the duration of unemployment. The second aim is to evaluate whether the participants have found a job after concluding the program, and the % of participants who have returned to unemployed status in the next few years.

Many authors have assessed the efficiency of labor market programs in the EU and Slovakia, often focusing on overall effectiveness. However, fewer studies evaluate programs aimed at helping the disadvantaged re-enter the labor market.

Martin (2015) states that the current global focus on implementing active labor market policies is primarily on monitoring, controlling, and evaluating the behavior of recipients by the institutions providing these measures. In their study, Orfao and Malo (2021) have focused on evaluating direct job creation and training, and counselling services. According to the outcomes, direct job creation policies have a clear negative effect, and training policies have, on average, a positive effect, either with or without counselling services.

Dar (1999) notes that active labor market programs have varied effectiveness; job search assistance is cost-effective, whereas training and public works programs often fall short. Conversely, Fay (1996) believes that active labor market policies can aid the unemployed in returning to work through counselling, job search assistance, and targeted employment subsidies. Calmfors (2002) examined the impact of large-scale active labor market programs in Sweden, finding that while they reduced unemployment, they also decreased regular employment, indicating inefficiency as an employment policy.

When we have a closer look at the studies focusing on Slovakia, we can mention, for example, Van Ours and Lubyová (1999). In their study, the authors tried to measure the individual-level effects of ALMP on exit from unemployment. They examined programs like socially purposeful jobs (SPJ), publicly useful jobs (PUJ), and retraining. Short-term subsidized jobs (PUJ) generally show positive effects on both job finding and job retention rates. Long-term subsidized jobs (SPJ) tend to have negative effects on job-finding rates. Van Dijk (2006), who analyzed the effects of graduate practice projects, retraining courses, and activation works in Slovakia, discovered that retraining and graduate work experience reduce unemployment duration, whereas activation work increases it. Harvan (2011) assessed the net impact of participation in programs such as school-leaving practice and publicly useful jobs (PUJ), concluding that these programs do not significantly enhance job prospects and may be inefficient. Domonkos (2016) highlighted the low expenditure on active labor market policies (ALMP) in Slovakia and the inefficiency of public services.

Štefánik (2014) evaluated training programs organized by COLSAF and found out that these programs often negatively impact employment chances due to inefficient implementation and a lack of proper evaluation. The authors Hidas, Vaľková, and Harvan from the Institute of Financial Policy (2016) analysed the efficiency of labor offices and active labor market policies (ALMPs), noting that Slovakia's long-term unemployed and low-qualified individuals face significant challenges. They concluded that ALMPs are primarily financed by EU funds and focus more on the short-term unemployed. Petráš (2018) analysed the effectiveness of education and retraining courses, finding that they have a significantly positive effect, especially on the long-term unemployed. The author states that approximately one year after completing the course, the chances of long-term unemployed employment increased by 6 percentage points compared to job seekers who did not participate in the REPAS retraining course. Participation also resulted in higher earnings for the participants. Štefánik (2021) claims that the introduction of education in the form of REPAS at the end of 2014 had an almost immediate positive effect on the unemployed. He investigated the various effects of the reform, including the reform effect, institutional effect, and selection effect. The reform effect was mainly positive, as it provided a wider choice of educational courses for the unemployed. Petráš (2020) states that participation in activation works through the municipality does not increase the employment rate of participants in the labor market, while participation in activation works through ALMP increases the

employment rate by approximately 1 percentage point. Furthermore, the author notes that participants in activation works (municipality/ALMP) remain in the financial aid system to a greater extent (3-6 percentage points) than similar non-participants.

These studies underscore the necessity for more precisely targeted and rigorously evaluated labor market programs to enhance their effectiveness, particularly for disadvantaged groups. However, a comprehensive perspective on these programs is lacking. Therefore, this study aims to provide a more thorough evaluation of the programs, specifically examining whether participants experience shorter unemployment periods compared to non-participants. According to the above-mentioned authors, the evaluation of labor market programs typically occurs after a certain period, with the most significant effects of participation observed in the long term. This underscores the importance of assessing whether participants return to unemployment in the subsequent years.

Main body

To compare the treatment group (those who received training) with the control group (those who did not), we will use the propensity score matching based on Heckman, Ichimura, and Todd (1997, p.608) and Hirano, Imbens, and Ridder (2003, p.1163). To achieve this, we will analysed data from the Institute of Social Policy to determine if the labor market programs mentioned previously positively affected the unemployment period and if participants remained employed or became unemployed again within five years.

We will use two datasets: one with program participants and one with all unemployed individuals, each with unique identification numbers to track re-employment status. Propensity score matching will exclude program participants from the control group to compare unemployment periods based on area, age, gender, and education. The data analysis will cover records from 1/1/2019 to 31/12/2023.

The research aim is to compare near-matched neighbours to assess if training affects the unemployment period. We will use propensity score matching (PSM) to compare participants and non-participants, estimating the average treatment effect on the treated (ATET) using the STATA program. In the second part, we will evaluate the number of participants in labor market programs who were unemployed again within five years. The treatment group consists of individuals from the first dataset who participated in the programs. The control group consists of individuals from the second dataset who did not participate in programs during the given period (1/1/2019 – 31/12/2023). This dataset is split into two periods due to its size. The second dataset logically contains both the participants and non-participants, and to exclude the participants from the control group, the IDs from the first dataset will be used. The cleaned control group dataset is combined from two periods, resulting in 327,083 entries for 2019-2020 and 304,614 entries for 2021-2023. The unchanged first dataset containing the treatment group has 114,572 entries. A dummy variable will be assigned to the dataset based on the received training, and the two datasets into one dataset with 746,269 entries.

To evaluate the training effects, the software STATA will be used for PSM. The dependent variable will be the unemployment period. The independent variables are gender, age, education, training received, and place of residence. We will assign values: 1 for urban areas, 0 for rural, 1 for received training, and 0 for none. We will use the Ministry of Interior NUTS classification of regions to distinguish between urban and rural areas. Residency in the NUTS4 region is considered urban, and anything below is considered a rural area.

The PSM calculation calculates the probability of being in the treated group and the effect of training based on area and other factors. The outcome is in Table 1. The treatment variable would be, in this case, the dummy variable training, which has the value of 1 if the person received some assistance and 0 if not. This way, the dataset is separated in STATA into two tables with results. The first with training =0 is the control group and the characteristics and the second with training =1 is the treatment group. In conclusion, the fundamental differences between the

groups can be characterized by factors such as age, gender, and education. The control group shows distinct differences compared to the treatment group when considering average characteristics. The most prominent one is unemployment duration, which in the case of people with training is 31 months compared to the control group, 12 months. This is logical as the condition for participation in some of these projects, which were aimed at the long-term unemployed, is evident in the evidence of more than 12 months. Other differences are visible, for example, the area, in the control group, 41 % are from urban areas, and in the treatment group, just 25%. In the case of gender, 60% of participants in training are women and just 40% are men, compared with the control group, where 53% are women. The education level is also higher in the control group, 4 in the ISCED classification, and 3 in the treatment group.

Table 1. Comparison of control and treatment group

Training = 0					
Variable	Obs	Mean	Std. Dev.	Min	Max
Unemploy_duration	631695	12,28	25,91	0	411
Area	631695	0,41	0,49	0	1
Age	631693	40,87	12,19	16	69
Gender	631695	0,53	0,49	0	1
Education	630066	3,52	1,66	1	8
Training = 1					
Unemploy_duration	114544	31,13	47,70	-18	378
Area	114572	0,25	0,43	0	1
Age	114570	39,80	12,03	16	69
Gender	114572	0,60	0,49	0	1
Education	114478	3,09	1,60	1	8

Source: elaboration in STATA

The probit regression in Table 2 shows the factors that influence the length of unemployment. The most prominent one that impacts long-term unemployment is the area, meaning the residency of the unemployed person. As it was stated also in the previous part, in areas that are in the eastern part of Slovakia, the unemployment period could be long due to not enough job possibilities. Even though the employment services and training could be effective due to the lack of possibilities unemployment in the rural areas will be still higher than in the urban areas. The second most prominent factor influencing long-term unemployment is education. The lower the education level, the higher the probability of being unemployed.

Table 2 Result of probit regression

Log likelihood = -309775,84				Number of obs. = 744542		
				LR chi2 (4) = 19518, 14		
				Prob > chi2 = 0, 000		
				Pseudo R ² = 0,0305		
Training	Coef.	Std.Err.	Z	P> z	[95% Conf. Interval]	
Area	-0,356	0,004	-90,23	0,000	-0,363	-0,348
Age	-0,005	0,0001	-33,82	0,000	-0,005	-0,005
Gender	0,202	0,004	55,52	0,000	0,194	0,209
Education	-0,081	0,001	-68,54	0,000	-0,083	-0,079
Cons	-0,541	0,008	-69,76	0,000	-0,556	-0,526

Source: elaboration in STATA

The largest propensity score we received based on the results in Table 3 is 30,8%, which means it is a chance of the observation of being selected into the treatment group and the smallest one is 3,1 %.

Table 3 Description of the estimated propensity score

Estimated propensity score				
	Percentiles	Smallest		
1%	0,045	0,031		
5%	0,069	0,031		
10%	0,078	0,031	Obs	744542
25%	0,107	0,031	Sum of Wgt.	744542
50%	0,151	0,031	Mean	0,154
		Largest	Std.Dev.	0,057
75%	0,199	0,308	Variance	0,003
90%	0,230	0,308	Skewness	0,091
95%	0,246	0,308	Kurtosis	2,137
99%	0,275	0,308		

Source: elaboration in STATA

Based on the difference in ATT between the treatment and control group, which is 15.7, which means this is the difference in unemployment duration between the treatment and control group, we can state that the unemployment duration of participants in the training is longer than those from the control group. This is logical, given that the conditions for participation include long-term unemployment or residence in less developed regions. However, a longer duration of unemployment in the treatment group does not necessarily indicate the ineffectiveness of the training, as the unemployment period could have been extended further without the intervention. Additionally, it would be valuable to conduct a long-term comparison of the treatment and control groups to assess any differences in unemployment duration over time.

When we look at the participation in one of the programs over a longer period, we can see slight differences in the outcomes of participants and their return to being unemployed again. The overview of the percentage of participants of each of the programs who have become unemployed again from 2020 to 2023 is in Table 4. The base is considered to be the year 2019, from which the participants are evaluated to see if they will be registered again as unemployed in the next years.

Table 4 Evaluation of the participation in the program

Project name	Participants in 2019	Unemployed in 2020	Unemployed in 2021 and later	2020/2021 in %
Be active, get a job	1176	601	1096	51/93
Path to the labor market	14010	3313	5197	23/37
Path to the labor market II	3855	1213	1532	31/39
Path to the labor market III	802	267	383	33/48
Counseling support for long-term unemployed	20746	2793	5293	13/25
Reconciliation of family and work life	370	120	122	32/33
Increased activity towards employment	9474	1427	2465	15/26

Source: Compiled by author

Based on the Table 4, the best results in the long-term show the program “Counselling support for long-term unemployed” and the program “Increased activity towards employment”. The counselling support was based on consulting services provided for the long-term unemployed in a rather short-term period, even though it is not a high cost for the state budget. This program seems to have a good influence on the unemployed, especially after a longer period. The second program, “Increased activity towards employment,” is also based on counselling activities for the long-term unemployed and older unemployed age of 50+ years.

The worst outcome is that the program “Be active, get a job” is based on a direct employment program, which was also aimed at helping long-term unemployed and those aged 50+ years.

Results and discussions

The results of the difference in unemployment duration between the control and treatment groups show that the unemployment duration of participants is longer than that of those who did not participate in some training

This is because the participants in these programs were already long-term unemployed before the program started, and the average unemployment period of the treatment group was longer than the unemployment period of the control group.

Based on the results, we can state that the factors that contributed the most to long-term unemployment were lower education and residency in rural areas.

The second evaluation of participation in a program and comparing whether the participants will again be unemployed in the next few years showed that the best outcomes were consulting services for the long-term unemployed. This finding is in alignment with the findings of authors like Orfao and Malo (2021), who also found counselling services to be effective, and Fay (1996), who believes that active labor market policies can aid the unemployed in returning to work through counselling and job search assistance.

When we compare the results of the long unemployment period of participants with the mentioned literature, we can see that authors like Petráš (2020) have noted that participants in publicly useful jobs stay longer in unemployment than non-participants. Štefánik (2014) has also stated that the training programs negatively impact employment chances due to inefficient implementation.

The Institute of Financial Policy (2016) also mentioned that low-educated people are usually among the long-term unemployed, noting that Slovakia's long-term unemployed and low-qualified individuals face significant challenges. However, the residency in the rural area was not mentioned in any of the literature.

The fact is that the direct employment programs were not effective in tackling unemployment, as the results in Table 4 show. The same outcome was also mentioned by Orfao and Malo (2021) and the Slovak authors Van Ours & Lubyová (1999) long-term subsidized jobs tend to have negative effects on job-finding rates and Petráš (2020) who think that participants in public useful subsidized jobs or so-called activation works (municipality/ALMP) remain in the financial aid system to a greater extent (3-6 percentage points) than similar non-participants. Activation works are similar to direct employment programs, but often are of poor psychosocial quality.

Conclusions

The objective of this paper was to assess the effectiveness of active labor market programs targeting disadvantaged individuals in Slovakia from 2019 to 2023. Utilizing propensity score matching to compare unemployment durations, the findings indicate that participation in these programs does not reduce the unemployment period. This is attributed to the fact that participants typically have a longer unemployment history compared to non-participants. The primary factors

contributing to long-term unemployment were identified as low educational attainment and residence in rural areas.

The secondary objective was to determine whether participants returned to unemployment within a few years. The results suggest that consulting programs yielded the most favorable outcomes, while direct employment programs were the least effective. These findings provide valuable feedback for policymakers, emphasizing the need for careful consideration in selecting programs for disadvantaged groups, particularly to address long-term unemployment.

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