THE EFFECTS OF PUBLIC WORKS PROGRAMS – THE CASE OF THE SLOVAK REPUBLIC

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Abstract
The long-term unemployment in Slovakia belongs traditionally to the highest group of such in the EU and represents one of the most serious problems for the Slovak labour market. More than one half of the unemployed are those with the lowest level of education, this paper thus focuses on the current situation of the low-qualified workforce as well as on the assessment of the effects of activation policy programs in Slovakia which are aimed at stimulating the growth of labour demand, especially for those who belong to the most disadvantaged groups on the labour market. However, international experience (e. g. Kudo, 2009) points to the fact that, when taking into account the low efficiency and cost ineffectiveness of this measure, it simply turns into a “safety net” supporting the income of individuals and decreasing the poverty rate among individuals disadvantaged in the labour market. The studies also uncovered that in the long run the impact of such measures on employment is in many cases negative, defining stigmatization of the program's participants as one of the reasons – the persons having participated in the programs are automatically considered as less productive, which decreases the probability of their job placement. The efficiency and cost effectiveness of these programs may be influenced considerably by the so-called lock-in effect which means that program participants may receive less job offers while attending the program as well as that they may be less motivated to seek for job openings.

Keywords: Public works, active labour market policy, unemployment

Introduction
Active labour market policy represents the complex of the programs designed to improve access to job openings and to enhance effective labour market functioning. It consists of various types of programs oriented on education, financial support for employers to boost new job openings, promotion of self-employment or direct support in the form of employment creation in the public sector. Especially those programs oriented on job creation are those being frequently criticized for their low efficiency, in terms that they actually do not improve the chances of job seekers in the open labour market, and for their insufficient cost effectiveness when it comes to public finance spent. There is a lack of studies that would provide a complex assessment of the active labour market policy programs (ALMP) in Slovakia, implying the evaluation of their efficiency and cost effectiveness; that is why the presented paper summarizes the results of the public works programs' cost-benefit analysis, both from the perspective of public finance as well as from the perspective of the programs' participants. As regards the programs' participants, we have focused on the results of a qualitative analysis, due to the low availability of data on participants’ incomes after job placement in the open labour market (on an individual basis).
Current situation in the labour market

The post-crisis situation on the Slovak labour market is of concern to many policy makers, unemployment rose notably due to recession in 2009 and still remains high; at the beginning of 2010, the number of unemployed climbed to 400 thousand persons (the value last seen in 2005) and although the economy’s recovery was somewhat better when compared to many other European states, the labour market's performance remains weak even after several consecutive years of economic growth. In 2013, the unemployment rate in Slovakia reached 14.2 % of the active population, the fifth highest in the EU (27). Low employment elasticity and weak relation between economic growth and job creation is known also from the past – even during the favourable macroeconomic development during the pre-crisis period, the employment threshold in the SR represented approximately 4 % (GDP growth rate); the rate of GDP growth at about 4 % or more was necessary to ensure employment growth over the decade before 2009. Also, the latest data confirms that it is again long-term unemployment which drives the total unemployment the most. Long-term unemployment currently represents more than two thirds of the total unemployment and the fact that it actually used to be 70 % also in the past (e. g. in 2006, at the beginning of the aforementioned favourable macroeconomic period) reveals that it is a structural problem and consists in certain specifics of the Slovak labour market.

Between 2002 and 2012, Slovakia ranked first among the EU countries in the long-term unemployment rate comparison. This decade-long negative leadership reflects several aspects that complete the overall picture of the current situation. Unemployed persons who have never had a job represent 20 % to 25 % of total unemployment (in the long-term); the absence of work experience, skills and acquired work habits creates a serious barrier in their employability. Next, the problem of unemployed persons without work experience is closely connected with the issue of youth unemployment and the problem of a low-skilled (low-qualified) labour force. While in the case of youth unemployment, the convergence towards the European average was obvious in the pre-crisis period (between 2000 and 2008 the youth unemployment rate figure for the SR dropped from the highest one in the EU to the eighth place, i.e. to the average value), in the case of low-qualified persons Slovakia occupies the absolute long-term leadership in the European comparison. The unemployment rate of low-educated persons in the SR varies from 40 % to 50 % in the long-term (categories 0-2 in Eurostat methodology). And lastly, the problem of the aforementioned disadvantaged groups in the labour market is linked to the situation of the marginalized Roma community and its perception in the Slovak labour market. Despite a slight improvement in the employment situation of the low-educated in the last year (2013), still 52 % of all unemployed in Slovakia are those with the highest attained primary education or vocational education without school-leaving exam (more than 200 thousand persons of a total, approximately, 386 thousand unemployed). Scaling up active labour market policy instruments and searching for policy solutions has risen on the policy agenda in the past few years, but how effective are the measures introduced and what are the downsides of the policy approaches adopted?

Low-qualified workforce

Low-qualified persons participating in active labour market policy programs represented 93 % of all public work program participants (data from 2011) so we will focus on this group of unemployed a little more in detail. The issue of low-qualified constitutes a very specific problem of the Slovak labour market that can be demonstrated by international statistics. Over the majority of the last decade, the unemployment rate of low-educated persons in Slovakia has been exceeding the EU average by more than 30 percentage points (p. p.) (compare red and green line in figure 1). In 2005, when the unemployment of the low-skilled workforce in the SR was at its highest, its value in Slovakia surpassed the EU average
by 41.2 percentage points (53.4 % of active population unemployed in Slovakia as opposed to 12.2 % in today’s EU countries on average; when “low-educated” or “low-qualified” refers to pre-primary, primary and lower secondary education). As shown in figure 1, the difference between the rates of total unemployment was only 7.3 p. p. After 2005, we can see a notable improvement in terms of a continual decrease in the unemployment rate for the low-qualified that stopped in 2008 when the crisis hit the Slovak economy; however, as the unemployment in this segment rose in other labour markets also affected by the crisis, gradual convergence to the EU average continued to 2010.

The unemployment rate for people with the lowest (primary) education remained fairly constant during the crisis, the biggest increases in unemployment were recorded in the lower secondary education segment, the largest group of unemployed in Slovakia (especially those with vocational education without school-leaving exam).

Despite a notable improvement in the employment of the low-qualified workforce in Slovakia after 2005 as well as more serious post-crisis effects in some other EU countries, Slovakia has retained its negative leadership position among the EU states since 1998 (the beginning of the series when data for most of today’s EU 27 countries became available). Figure 1 also tracks the difference between the rates of unemployment of low-skilled persons in Slovakia as the first-ranked country over the whole period and between the second-ranked countries (the second place was occupied by Bulgaria until 2002, then by Poland, until Czech Republic surpassed the Polish unemployment rate of low-qualified, and finally replaced by Lithuania, where unemployment of low-educated rose steeply during the crisis). The figure demonstrates that over most of the examined series the difference between first-ranked Slovakia and the country with the second highest level of unemployment for this workforce segment remained abysmal.

Figure 1 EU countries with the highest unemployment rate of low-qualified workforce over the period 2000 - 2011

<table>
<thead>
<tr>
<th>Unemployment rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slovakia total</td>
</tr>
<tr>
<td>EU 27 total</td>
</tr>
<tr>
<td>Czech Rep. low-skilled</td>
</tr>
<tr>
<td>Lithuania low-skilled</td>
</tr>
<tr>
<td>Poland low-skilled</td>
</tr>
<tr>
<td>Bulgaria low-skilled</td>
</tr>
<tr>
<td>Slovakia low-skilled</td>
</tr>
<tr>
<td>EU 27 low-skilled</td>
</tr>
</tbody>
</table>

Note: Low-qualified = pre-primary, primary and lower secondary education. Graph also compares the levels of EU and SK overall unemployment rates (area charts).

Source of data: Eurostat database (2013).

The direct impact of the crisis varying across Europe can be illustrated by a detailed view of the four years in figure 2 (we can consider 2008 values as an initial pre-crisis level). In this context, the crisis has brought little change in the unemployment rates of the low-educated in Slovakia when compared to some other European countries; simply because the initial level of unemployment of this segment was higher than any other EU member state.
Figure 2  Unemployment rates of low-qualified persons in the EU 27 countries

Note: Education level 0 – 2 by Eurostat methodology = pre-primary, primary and lower secondary education.
Source of data: Eurostat database (2013).

Obviously, with lower skills and qualifications it is more difficult to obtain employment, even in a favourable economic situation; low-qualified persons face barriers to entering as well as remaining in employment – in economic turbulence, employability of this disadvantaged group slumps. Boosting employment of low-educated persons by better targeted vocational training or tailoring education to the labour market's needs remains a top priority of today’s policies.

**Participation in active labour market policy programs in the SRwith special focus on public works programs**

The largest group of those activated by the public work programs consists of job seekers with primary education as the highest attained level of education. In 2005 they represented approximately one half of the total number of persons involved in this type of program. The second largest group was formed by job seekers with vocational education without school-leaving exam (25 % to 31 %) and job seekers without education (8 % to 15 %). Based on the statistics of program participation by the job seekers’ highest education attained it is clear that the public work programs are used predominantly (in the long-term) by those persons with the lowest levels of education (or without education) – during 2005 – 2011 their share in the total number of participants ranged from 88 % in 2005 to 93 % in 2011. The participation of persons with higher education levels is very rare. Detailed statistics on the public works programs is presented in Table 1.

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31 In the cost-benefit analysis we include only the Activation activity allowance by the form of smaller community services for a community or smaller services for self-governing regions (§52) among the public works programs.
Table 1  Statistical data related to public works programs

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2008</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of jobs created by public work programs</td>
<td>156,686</td>
<td>171,739</td>
<td>21,849</td>
</tr>
<tr>
<td>Number of job seekers on public work programs out of 100 unemployed persons</td>
<td>46</td>
<td>74.5</td>
<td>5.6</td>
</tr>
<tr>
<td>Number of job seekers on public work programs out of 100 long-term unemployed persons</td>
<td>87.8</td>
<td>152.7</td>
<td>11.7</td>
</tr>
<tr>
<td>Total number of unemployed persons activated by ALMP program</td>
<td>260,270</td>
<td>253,459</td>
<td>101,783</td>
</tr>
<tr>
<td>Proportion (%) of job seekers activated by public work programs out of total number of activated unemployed persons</td>
<td>60.2</td>
<td>67.8</td>
<td>21.5</td>
</tr>
<tr>
<td>Total number of unemployed persons</td>
<td>340,401</td>
<td>230,433</td>
<td>389,264</td>
</tr>
<tr>
<td>Total number of long term unemployed persons</td>
<td>178,520</td>
<td>112,452</td>
<td>187,028</td>
</tr>
</tbody>
</table>

Note: The drop in the number of jobs created by the public work programs after 2008 was due to restrictions of the target group persons entitled for program participation and limitations on repeated placement into the program scheme.
Source: Barošová et al. (2012).

Table 2 presents the expenditure aspect of the public work programs. As illustrated by the table, the expenditure on such type of the programs decreased considerably between 2009 and 2013; the share of the public work programs in total expenditures on the active labour market programs (ALMP; categories 2-7) dropped from 5.4 % in 2009 to 2.2 % in 2013.

Table 2  Expenditures on public works programs (2009-2013)\textsuperscript{22}

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure on public works programs</td>
<td>5,116,507</td>
<td>5,162,078</td>
<td>3,811,079</td>
<td>2,720,817</td>
<td>2,185,422</td>
</tr>
<tr>
<td>Total expenditure on ALMP (categories 2-7)</td>
<td>94,388,159</td>
<td>152,660,998</td>
<td>154,190,066</td>
<td>135,714,790</td>
<td>100,947,471</td>
</tr>
<tr>
<td>Proportion (%) on public work programs</td>
<td>5.4 %</td>
<td>3.4 %</td>
<td>2.5 %</td>
<td>2.0 %</td>
<td>2.2 %</td>
</tr>
</tbody>
</table>

Source: Central Office of Labour, Social Affairs and Family.

**Methodology**

In the evaluation process of the economic return of costs spent on the public works programs of active labour market policy (ALMP) we used cost benefit analysis (CBA). CBA is a useful tool for decision making, whereby it serves to assess whether the costs of a particular program which are related to its implementation are less than its benefits. The advantage of this method is the ability to assess the overall effectiveness of the program of ALMP, which means that in practice there may be a case in which the program can be effective in relation to the increasing of the program participants’ employment but it can be also very expensive. However, analysis itself does not guarantee that the funds will be invested effectively but it helps to reduce the risk that these funds will be invested incorrectly. Here it should be noted that in the public sector the economic aspect is not in all cases the main criteria for allocation of funds, as well as the fact that nowadays we do not have a definition of “disproportionate costs” and therefore decisions on the adequacy or

\textsuperscript{22} Expenditures in Table 2 do not include expenditures on activation allowances, which are paid to unemployed people during participation in the public works programs. For an estimate of the activation allowances (around 9.5 mil Euros) for 2011 only for participants who were included in the analysis we took into account the number of program participants, the amount of activation allowance and the average duration of program participation, which is around 5.75 months.
inadequacy of the consequences of ALMP programs related to some extent with what Slovakia can and also what is willing to give for the realization of the goals in the field of solving problems on the labour market with regard to its economic possibilities. The advantage of the cost benefit analysis is also the fact that it allows the description of the wider social impacts of particular ALMP programs, which is important for evaluating the results which have already been achieved. When using this method, all costs and benefits are measured in monetary terms, whereby it is necessary to take into account only the effects of the particular program which is being evaluated at that moment. From the perspective of realizing programs of active labour market policy, the effects could be measured from the program participants’, government or the economy as a whole, point of view (table 3).

Table 3 Overview of the quantifiable costs and benefits arising from the implementation of active labour market policy programs

<table>
<thead>
<tr>
<th>Benefits / Costs</th>
<th>Benefits</th>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economy as a whole</td>
<td>Value of new jobs created</td>
<td>Total cost of the program</td>
</tr>
<tr>
<td></td>
<td>Potential multiplication effects</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>Increased taxation</td>
<td>Total cost of the program</td>
</tr>
<tr>
<td></td>
<td>Social security/health contributions paid on employees</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reduction in health and social benefit payments</td>
<td></td>
</tr>
<tr>
<td>Program participants</td>
<td>Increase of disposable income</td>
<td>Decrease/loss of state social benefit payments</td>
</tr>
</tbody>
</table>


Problems associated with the quantification of the costs and benefits which are difficult to convert to cash flows present the significant limitation of this method. In this case, it is possible to express effects only in a qualitative way. Due to the unavailability of data for a comprehensive assessment of all aspects of this issue, we will in the next part of this article pay closer attention only to the analysis of the costs and benefits for the public works programs from the government's point of view, which means from the public finance's point of view according to the prof. O’Higgins, N. (2009) methodology. We evaluate only the direct effects; indirect effects are not rated. Technically, our approach means that for the chosen programs of active labour market policy we will compare the current value of all benefits with the current value of all costs related to the realization of the particular programs of ALMP in terms of public finances (table 3). In calculating the benefits for the government we come out from the analysis of the programs' impact on employment within 15 months after ending participation in the programs (figure 3). The analysis of the public works programs' impact on the employment of the programs' participants within 15 months after its ending showed that participation in these kind of programs slightly reduced the possibility for the job seekers to find a working place on the open labour market, which may to some extent be related to the lock-in effect or even because of persistence of stigmatization of individuals participating in this type of work and these people are in many cases automatically considered as less productive which, in the long run, can reduce their likelihood of placement on the open labour market.

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33 This analysis was performed by Štefánik, M., Lubyová, M., Dováľová, G., Karasová, K. (2014).
The calculation of benefits for the government over the next five years is based on the approximation of the present value of all future flows arising from the realization of the particular program. Conversion to the present value is realized by discounting future flows.\textsuperscript{35}

Benefits for the state can be expressed as:

\[ GB = \sum_{m=1}^{5} \frac{\sum_{i}^{m} \left( H_{Bn,i} + S_{Bn,i} + I_{Bn,i} + T_{n,i} \right)}{m}, \]

GB presents government benefits, HB saving in contributions from the health insurance company, SB savings on state social benefits, IB contribution to the social insurance company and T benefits from direct and indirect taxes (VAT).

Two variants have been analyzed.

In variant 1 (gross effect) we analysed the impact of the public works programs' realization on public finances, thus we compare the costs of the programs with the gross benefits of the programs participants in the short term as well as in the mid-term, which means within 5 years after finishing participation in the program.

In variant 2 (net effect) we analysed the net effect of public works programs, which means the gross benefit of the programs' participants reduced by the gross benefit of the control group is compared with costs spent for these programs.

Gross benefit means only the benefit accruing from the placement of job seekers supported under the ALMP program.

By net benefit we mean the benefit accruing from the placement of job seekers supported under the ALMP program reduced by benefit accruing from the control group.

The gross effect means benefits from the ALMP program participants reduced by the costs of the particular program. Thus, when calculating the gross effect, we only considered whether the costs for the program were returned to the government during the reporting period via benefits “derived” from the participants of public works programs.

The net effect of ALMP programs on public finances represents the difference between net benefits and initial costs for the ALMP programs. In calculating the net effect we compared initial costs for the programs with net benefits (gross benefits from program

\textsuperscript{34} It takes into the account the removing from the database of the Central Office of Labour, Social Affairs and Family of the SR due to placement in the labour market.

\textsuperscript{35} According to the communication of the European Commission, the reference (discount) rate for the Slovak Republic was from January 2011 set at the level of 1.45 % (http://ec.europa.eu/competition/state_aid/legislation/base_rates_eu27_en.pdf).
participants accruing to the government reduced by the benefits from the control group). When evaluating the net effect of the program it should be taken into account that the control group considers only some common characteristics with the program participants (e.g. age, education, sex, region, length of unemployment etc. but some characteristics such as criminal records of job applicants etc. could be not considered for objective reasons). So we are aware of the fact that there is some disproportion in expressing the situation that would occur in the case that the program would not be implemented.

Due to the complexity of the issue and the unavailability of necessary data at the time of producing the analysis, the authors considered several simplifications:

- in the cost-benefit analysis we consider only direct costs for the selected ALMP program, while abstracting any additional costs in human and material resources needed to implement the program;
- we abstract from the costs associated with the various effects, such as the effect of displacement etc.;
- due to the absence of data on income of job seekers on an individual basis from the social insurance company, there were created two scenarios: in scenario 1 we consider that job seekers are employed on the open labour market only for the minimum wage and in scenario 2 we consider that they are employed for the median wage (according to age, region and education)
- when calculating the tax levy, we have only taken into account a tax allowance for the taxpayer on a monthly basis;
- we abstract from the unemployment benefits;
- we abstract from the value of leisure time (i.e. from all activities conducted outside the labour market, whereby many of these activities can increase social benefits, for example childcare, various forms of domestic production etc.)
- we abstract the opportunity costs, representing the value of goods from the kind of activities that must be sacrificed in favour of the selected action (in this case, implementing ALMP programs)
- we abstract additional expenses, which could arise for the job seeker during the realization of the ALMP program, for example, transportation costs etc.
- the forecast of benefits for the government for 5 years is based on the assumption that the probability of job seekers finding places on the open labour market after 15 months of the ALMP program completion is constant.

**Financing of ALMP programs in the Slovak Republic**

Active labour market policy as a tool to combat unemployment is gaining importance in many EU countries, as evidenced by the fact that many countries have increased the percentage of GDP which is spent on the implementation of particular ALMP programs. Some countries, for example Belgium, Austria, Spain and Luxembourg, have increased expenditure on ALMP programs (categories 2-7) expressed by percentage of GDP as well as expenditure on ALMP programs (category 1), which means for labour market services. Finland increased spending on ALMP programs (categories 2-7) during the monitored period from 0.705 % to 0.857 % of GDP (the largest increase in spending was in category 2 – training), however expenditure on labour market services remained relatively small, at 0.124 % of GDP. In Germany we can observe the slight decrease in expenditure on ALMP programs (categories 2-7) from 0.469 % to 0.446 % of GDP, however expenditure on labour market services increased from 0.27 % to 0.34 % of GDP. In Slovakia we can see that during

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36 See for example D.H. Greenberg (1997).
37 Category 1 – labour market policy, category 2 – training, category 4 – employment incentives, category 5 – supported employment and rehabilitation, category 6 – direct job creation, category 7 – start-up incentives.
the analysed period expenditure on labour market services slightly decreased from 0.11 to 0.07% of GDP, while expenditure on ALMP programs (categories 2-7) slightly increased from 0.12 % to 0.22 % of GDP, but when compared with the average of EU countries they still remain at a relatively low level (figure 4).

Figure 4  Expenditure on ALMP programs (categories 1-7) as % of GDP (2007-2011)

![Expenditure on ALMP programs (categories 1-7) as % of GDP (2007-2011)](image)

Source: Based on Eurostat databases.

Cost-benefit analysis of public works programs

Public works were originally a tool for direct job creation which stimulated growth of labour demand. The effort of their implementers was to prevent deterioration of human capital by supporting the returning process of job seekers to the labour market. Nowadays, many foreign authors (e.g. Kudo, 2009) point to the fact that, due to lack of effectiveness, this tool is mainly used as a “safety net” which supports an individual’s income and as a tool for decreasing the poverty rate of disadvantaged individuals on the labour market (in many cases these individuals are long-term unemployed people with low qualification).

OECD recommends that these types of ALMP programs should be focused primarily on the long-term unemployed with low qualification and that the greater effectiveness of these programs can be achieved by combining them with the education process. For achieving greater efficiency, the proper targeting of these programs is also very important. The international experience shows that public works programs are more suitable for long-term unemployed people in old age, whose mobility is significantly lower and who have little chance of being employed in the private sector, especially in areas with high unemployment rate (Kudo, A., 2009).

Qualitative analysis of the public works programs' costs and benefits from the participants' point of view

According to the monitoring report (Barošová, M. et al., 2012)\(^ {38}\), the main qualitative benefits for program participants resulting from the nature of this ALMP program, which performs several functions (especially activation, socialization and redistribution functions). Currently there are mainly low-skilled job seekers activated through this program who are very often in material need from the long term perspective and they usually come from regions with a high unemployment rate and low employment opportunities. These problems are often compounded by the low labour mobility, thus this tool helps to a certain extent involve disadvantaged job seekers into work, to get/keep their work habits as well as a form of social contact.

The redistribution function is related to the income support of program participants, who receive an activation allowance amounting to 63.07 Euros during participation in the

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\(^ {38}\) The monitor report was based on a questionnaire which was answered by 62 employees from different regional Offices of Labour, Social Affairs and Family.
program, and this contribution is a contribution to the benefit in material need. According to conducted monitoring (Barošová, M. et al., 2012), approximately 62 % of respondents claimed that these programs are important either to acquire work habits or for the elimination of social exclusion of job seekers, or for both of these reasons.

Only about 1% of respondents said that these programs are tools for improving the financial situation of job seekers and only 2% of respondents agreed that public works programs help the long-term unemployed to find jobs on the open labour market. Clear consensus among respondents was not achieved in responses regarding whether these tools intensified job searching by job seekers or not (47% of respondents answered yes and 47% of respondents answered no, while 6% of respondents did not respond).

Among the costs of ALMP program participants we can include especially costs associated with the risk of locking job seekers to subsidized job positions, which is connected with a reluctance to seek employment in the open labour market (60% of respondents), as well as opportunity costs.

**Gross effect of public works programs on public finance**

The calculation of the gross effect of public works programs is based on the fact that in 2011 around 3,811,079 Euros were spent on these programs and about 85% of expenditure came from the European Social Fund (ESF). Taking into account that activation benefits paid to the program participants are not included in this amount of money, their calculation is based on the average duration of one subsidized working place, which is around 5.75 months and on the number of program participants, i.e. 26,095 persons, who were included in this analysis (these contributions are paid from the state budget, their total amount is presented in Table 1 in brackets, whereby in parentheses we also present the calculations of gross revenues reflecting the total amount paid for activation benefits to participants of these programs).

In Table 5 we can see the effects of providing public works programs on public finance in the short (within 1 year) and medium terms (within 5 years). Taking into account that participants of these programs are mainly long-term unemployed people with low qualification, we consider Scenario 1 as more realistic, which means that participants will be employed after completing the program on the open labour market for the minimum wage. In regard to the relatively low probabilities of job seeker placement in the open labour market within one year after finishing the program, and with respect to the qualification structure of program participants, it is not possible to assume that the financial expenses spent in the program could be returned to the government in short period, although this should also be not expected for this type of ALMP program.

Under the certain assumptions which we assumed for the estimation of the gross effects (see Methodology), it could be expected that the return period of the expenses for public works programs would be in the medium term (within 5 years after completion of the program). In the case that we consider only the resources expended from the state budget, it is possible to expect a shorter payback period, approximately by one year.
Table 5  Gross effect of the public works programs (in Euros)

<table>
<thead>
<tr>
<th>Year</th>
<th>Costs of the programs</th>
<th>scenario 1</th>
<th>scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gross benefits</td>
<td>Net benefits</td>
</tr>
<tr>
<td></td>
<td>State budget</td>
<td>ESF</td>
<td>(state budget)</td>
</tr>
<tr>
<td></td>
<td>571,662 (9,463,417)</td>
<td>3,239,417</td>
<td>x</td>
</tr>
<tr>
<td>1. year</td>
<td>x</td>
<td>x</td>
<td>2,102,686</td>
</tr>
<tr>
<td>2. year</td>
<td>x</td>
<td>x</td>
<td>4,959,057</td>
</tr>
<tr>
<td>3. year</td>
<td>x</td>
<td>x</td>
<td>7,823,627</td>
</tr>
<tr>
<td>4. year</td>
<td>x</td>
<td>x</td>
<td>10,647,254</td>
</tr>
<tr>
<td>5. year</td>
<td>x</td>
<td>x</td>
<td>13,430,524</td>
</tr>
</tbody>
</table>

Note: The estimation of the expenses for the activation allowances is shown in brackets.
Source: Own calculations.

Net effect of public works programs on public finance

Table 6 shows the net effect of the public works programs. The costs of the programs are compared with the net benefits (gross benefits of the programs' participants are lowered by the benefits for the government from the control group). The estimation of net benefits is based on the probability rates of program participants’ placement in the open labour market after finishing the programs and those of control group, which were calculated in the previous work (Štefánik, M., Lubyová, M., Doválová, G., Karasová, K., 2014) and which we have shown in the Methodology section. Because of the higher probability rate of placement in the open labour market for a control group than for program participants, net benefits have negative values in the case of both scenarios.

Table 6  Net effects of the public works programs (in Euros)

<table>
<thead>
<tr>
<th>Year</th>
<th>Costs of the programs</th>
<th>scenario 1</th>
<th>scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Net benefits (participants)</td>
<td>Net benefits (all)</td>
</tr>
<tr>
<td></td>
<td>State budget</td>
<td>ESF</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>571,662 (9,463,417)</td>
<td>3,239,417</td>
<td>x</td>
</tr>
<tr>
<td>1. year</td>
<td>x</td>
<td>x</td>
<td>-1,308,572</td>
</tr>
</tbody>
</table>

Note: The estimation of the expenses for the activation allowances is shown in brackets.
Source: Own calculations.

The results of the analysis as well as those of the monitoring suggest that after completing the public works programs the chance to find a job in the open labour market for the program participants does not increase markedly (e.g. participation in these programs is not connected with the education process, which means the discrepancy risk of the necessary skills and qualification of job seekers is not reduced), even more on the contrary in some cases the chance of participants may decrease (e. g. there is a risk of being trapped in a subsidized job, the risk of stigmatization of program participants, who are very often seen as
less productive). For this reason we do not expect that the expenses for the public works programs could be returned though net effects in the short or medium term.

**Conclusion**

Slovakia is one of the countries with a relatively high unemployment rate and low expenditures on active labour market policy. In the past, public works programs were very often used as active labour market policy programs, but nowadays the trend is reversed and these kinds of programs are mainly used for long term unemployed people with low levels of education. International experience shows that if these programs were linked with the education process, the job seekers have, after finishing them, a higher chance to be placed on the open labour market. This educational element is largely absent in the implementation process of public works programs in Slovakia. This is also one of the reasons why, after finishing these kind of programs, the chance for their participants to be placed on the open labour market does not significantly increase; even the previous analysis carried out from individual data from the Central Office of Labour, Social Affairs and Family showed that their chances within 15 months after finishing the program were even lower than for the control group. This fact may be related to factors such as lock-in effect, also with the reduced job seeking intensity during the participation in the program as well as with the persistent stigmatization of public works programs, while those job seekers who participated in such programs may be seen as less productive.

The selection effect has a very important role in the evaluation process of public works programs. Job seekers have to meet certain criteria when they want to participate in these programs, they have to be long term unemployed and they have to receive benefits in material need. These people often have to face several problems at the same time (lack of skills, health and social problems etc.), while actually regional Offices of Labour, Social Affairs and Family do not have sufficient staff capacity to help them to solve all their problems enough to be able to be placed on the open labour market.

From our cost-benefit analysis it can be seen that, from the perspective of program participants, these programs are very important tools that support low-income job seekers and, in many cases, these programs have a very important socialization and activation role (i.e. improving of work habits) mainly in those regions where the jobs offer is very low. In gross effect, in regard to the relatively low level of probability for program participants to be placed on the open labour market after finishing public works programs and with respect to their low qualification level, it is not possible to expect that financial expenditure spent on these programs could be paid back in a short time period. Under the certain assumptions underlying the estimation of gross effects, we can expect a return of expenditure on these programs in the medium term, which means within five years. In case that we consider only the expenditures from the state budget, we can expect about a one year shorter return period. However, on the net effect we do not expect the expenditure return either in the short or medium term period.

**Note:**
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**References:**
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