Jovan Zubovic[1], Ivana Domazet[2]

EFFECTIVENESS OF GOVERNMENT INTERVENTIONS AT LABOUR MARKETS — THE CASE OF WOMEN AND YOUTH IN SERBIA[3]

This paper evaluates the effectiveness of active labour market policies on two largest vulnerable groups at Serbian labour market — women and youth. By means of adapting methodology of other authors we concentrate on in-depth empirical research within the target groups to determine what policies bring most gains. Moreover, by using econometric matched pair design methodology we have undertaken a microevaluation of several different ALMP used in Serbia with a goal of obtaining precise information on the difference in effects among measures. The results that we have achieved are to a certain extent surprising, showing that widely utilised matching methodology can be altered and improved. On the other hand, we found that women and youth perform better than average in effectiveness of active labour market policies.

Keywords: women and youth at labour markets; ALMP; evaluation; matching model.

JEL Classification: J08, J21, J18, J68.

Йован Зубовіч, Івана Домазет

ЕФЕКТИВНІСТЬ УРЯДОВОГО ВТРУЧАННЯ НА РИНКУ ПРАЦІ (ЗА ДАНИМИ ЩОДО ЖІНОК І МОЛОДІ В СЕРБІЇ)

У статті оцінено ефективність активної політики на ринку праці на прикладі двох найбільш вразливих груп на сербському ринку праці — жінок і молоді. За допомогою адаптованої методології інших авторів проведено ретельне емпіричне дослідження даних груп для визначення оптимальної політики. З використанням економетричної методології співпадаючих пар проведено мікрооцінювання декількох різних активних політик на ринку праці Сербії з метою здобуття точної інформації про відмінності між ефектами різних заходів. Отримані результати в якійсь мірі несподівані, вони показують, що широко вживана методологія може бути модифікована і покращена. З іншого боку, з'ясувалося, що жінки і молодь показують результати вище середнього в рамках чинних політик на ринку праці.

Ключові слова: жінки і молодь на ринку праці; активна політика на ринку праці; оцінювання; модель відповідності.

Йован Зубович, Ивана Домазет

ЭФФЕКТИВНОСТЬ ВМЕШАТЕЛЬСТВА ПРАВИТЕЛЬСТВА НА РЫНОК ТРУДА (ПО ДАННЫМ О ЖЕНЩИНАХ И МОЛОДЕЖИ В СЕРБИИ)

В статье оценено эффективность активной политики на рынке труда на примере двух наиболее уязвимых групп на сербском рынке труда — женщин и молодежи. С помощью адаптированной методологии других авторов произведено тщательное эмпирическое исследование целевых групп для определения оптимальной политики. С использованием эконометрической методологии совпадающих пар произведена

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[1] PhD, Economics Institute, Belgrade, Serbia.
[2] PhD, Institute of Economic Sciences, Belgrade, Serbia.

микрооценка нескольких разных активных политик рынка труда, используемых в Сербии, с целью получения точной информации о различиях между эффектами предпринимаемых мер. Полученные результаты в какой-то мере неожиданны, они показывают, что широко применяемая методология может быть модифицирована и улучшена. С другой стороны, выяснилось, что женщины и молодежь показывают результаты выше среднего в рамках действующих политик на рынке труда.

Ключевые слова: женщины и молодежь на рынке труда; активная политика на рынке труда; оценивание; модель соответствия.

Introduction. Government interventions against falling employment and rising unemployment include active labour market policies (ALMP). The evaluation of their economic impact is widely discussed by academics worldwide for several decades. However, improved databases and modern statistical software facilitate more precise analysis and evaluation of the economic impact which they create.

Several factors including recession have led the employment in Serbia to fall to a historical minimum in 2012. Expenditure on ALMP in Serbia equalled to only 0.1% of GDP in 2009 and 2010, substantially lower than 0.76% which is an average in the EU27. Increase of the expenditure to 0.14% in 2011 generated positive results measured by econometric tools (Zubovic, Subic 2011; Eunes 2011), but it has not been accompanied by comprehensive research on the vulnerable groups.

In this paper we aim to implement an indepth research on the effectiveness of ALMP in Serbia for two largest vulnerable groups — female and youth. The research is based on the methodology introduced in the project supported by RRPP (2012), adjusted to targeted population groups. Moreover, by means of econometric tools we evaluate the difference in the effects of targeted policies on women and youth as compared to general population at Serbian labour market.

The paper consists of 5 parts: The first part reviews literature on evaluation of active policies. In the second part we present the research methodology used in the paper, in the third we deliver the results collected form Serbian labour market. In the fourth part we analyse and discuss our findings. Finally we give conclusions and recommendations for further research.

Literature review on active labour market policies and their evaluations. Labour market policies were initially introduced through "Public Works" at the beginning of the twentieth century as an answer to growing unemployment. Economists of that era, most of all Keynes, had worked on development of the (un)employment theory and models for managing labour market trends. The theory of multipliers introduced by Kahn (1931) was used by Keynes (1936) to prove that public works and government interventions can help fighting unemployment.

First ALMPs were introduced after the WWII and have significantly changed since. Firstly introduced in Scandinavian countries they served as an integral part of the model of economic and social change. They were used to reduce short-term inflationary impact of high employment along with solving the problem of fast-growing demand for labour (OECD, 1964, Barkin, 1967). Mostly positive impact of initial measures was presented in several papers (OECD, 1993; Katz, 1994 etc.).

Estevao (2003) and Betcherman et al. (2004) pointed that constant increase in unemployment rate in the 1970s and 1980s, which came after the oil shock crisis, was

the consequence of mismatch in labour supply and demand. Unemployment in the OECD countries increased by 3% in 1988 (Martin, 2000). Emancipation of women and young people has led to significant growth on the supply-side at labour market. Therefore, it was necessary, at first in France, Germany and the United States, to introduce new programs targeting labour supply, specifically vulnerable groups. Interventions were extensively used to facilitate adjustment of labour to market needs. At that stage ALPMs became a part of employment strategies in transition countries in the form of public works or training programs (OECD, 1990).

Growth of the expenditure on ALMP made evaluation of their effectiveness a necessity. According to Harrell et al. (1996), there are 4 basic types of evaluations: performance monitoring, impact evaluation, cost-benefit analysis and the process evaluation. Zubovic and Subic (2011) presented the results of the research based on cost-benefit model conducted in Serbia for the period 2008-2010. Several other papers define methodological framework for the evaluation of the impact of ALMP (Fay, 1996; Dar and Tzannatos, 1999; Daguerre and Etherington, 2009; OECD, 1993). The first scientific papers on the evaluations, like Calmfors (1994) brought very puzzling results. However, advanced information systems eased the analysis of data, therefore Lehman and Klueve (2010) claim that using improved research methodology it is possible to prove that ALMPs have positive effect both on individual likelihood of exiting unemployment and on aggregate employment growth.In this paper we will use the principle presented by de Koning and Peers (2007). Our focus will be on the use of matching model comparing the participants' results with the ones of the control group.

Over the past 15 years there was a significant increase among researchers in the countries of the Central and Eastern Europe. These studies helped us to better understand how labour markets act in new economic environment introduced by transition (Lehmann, Klueve, 2010). In those countries budgets available for ALMP are very limited, and for that reason it is important that the effects are properly assessed in order to make the right distribution among different types of measures. Evaluations in transition countries include several papers (Zubovic, Simeunovic, 2012; Zubovic, Subic, 2011; Lehman, Klueve, 2010; Ognjenovic, 2007; Bonin, Rinne, 2006; Betcherman, Olivas, Dar, 2004; Spevacek, 2009 and many others).

Methodology. Zubovic and Simeunovic (2012) analysed the effects of ALMP on the whole population of registered persons at NES at the beginning of 2008 and 2009 without using econometric models to prove causality of the effects. In order to make results more robust it is necessary to enrich the methodology by creation of a valid control group and performing matching test in order to determine what exact effects the investments in ALMP in Serbia result with.

Zubovic and Subic (2011) note that classically designed experimental evaluations start with creation of a randomly selected sample (or use a complete population) of unemployed persons before they were exposed to any active policy. If the sample is large enough and if there is a proper control group, by changing the independent variable (in this case participation in any type of ALMP), we may measure the change in the achieved results. Such changes can be attributed to participation in ALMP. The matching methods create a subset of the control group whose members are paired with participants in the factors measured, and thus get precise and robust results.

According to Garson (2010), a matched pairs design selects different but somewhat similar participants according to any important characteristics that might affect performance.

In order to avoid such problems new quasi-experimental models have been developed. They differ from experimental models in a method of selection of experimental and control group. Instead of a random sample they are selecting participants after the measures have been implemented. By using econometric techniques of matched pairs it is possible to correct the disparities between the two groups, and with the low cost to evaluate the effects independently of the implementation of policies.

The sample in our research consist of the individuals who have participated in ALMP (experimental group), and a control group of individuals with whom we have compared 5 observable variables[4] (characteristics) prior to exposure to the treatment (active measures) in the period prior to 30.06.2011. In order to facilitate selection of control group, we have shortened our experimental group to 17,943 persons who participated in ALMP (and exit from them) in the period 01 Jan 2011 - 30 June 2011. In evaluation we compared their results with the results achieved by the control group of unemployed persons of the same size, who had equal chance of being selected, but did not participate in the implementation of active measures. Thus, the average effect of ALMP was defined as the difference in employment rates achieved by two groups of persons, after we ensure consistency across the observed variables. Effectiveness of the measure was made basing on the results of comparison of achieved results measured by two different outcomes. The first is employment status 3 months after the exit from the measure (Yes/No). The second is the number of days a person was employed in the period of 6 months after the exit from the measure. That was made by using the access to interlinked databases of NES and the Institute of Social Insurance, by which we were able to trace and distribute all persons from our experimental and control group who have found jobs into 21 sub-groups with total days of employment according to business sectors in NACE rev.2 classification. Using the data sorted according to NACE classification helped us to perform a cost-benefit analysis published in Zubovic and Simeunovic (2012). Combination of the results from this paper and the one named above will be the basis for the further research necessary to be conducted in order to complete robust cost-benefit analysis with precise information on the net-financial benefits of the investments in ALMP.

Moreover, another novelty of this paper is an attempt to cope with a problem of data on ALMP in Serbia which is recorded and sorted according to the national classification that significantly differs from the EC methodology (EC, 2006) which divides them into 6 categories (training, job rotation and job sharing, employment incentives, supported employment, direct job creation and start-up incentives). Since data sets available from the NES are not comparable to the EC methodology we have in cooperation with IT centre in NES developed a software module which gives possibility to rearrange data so as to comply with the EC methodology, therefore making our results easily comparable with other research in Europe.

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[4] The first criterion is "Gender" which has 2 categories: Male, Female. Second criterion is the "Region", which has 30 categories. The third criterion is "The level of education" which has 10 categories. The fourth criterion is "Age" which has 10 categories: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-65. The final fifth criterion is "Occupation", which has 19 categories.

Similar methodology was applied in other research conducted in Serbia, like Eunes (2011) and Ognjenovic (2007). In both of those there has been evaluated the impact of certain group of measures using matching methodology. However, there has not been analysed the effectiveness of the whole set of measures implemented by NES, nor have been the results presented in such a way so as to be comparable with the studies in other countries.

Research results.

Aggregate data on ALMP in the EU and Serbia. Economic reforms in the countries with a centrally planned economy (transition economies) since the beginning of the 1990s had significantly increased the level of open unemployment, and raised aggregate unemployment to above the EU-15 average. For that reason, budgets for ALMP increased until 2005. In the period 2006-2008 they have been slowly diminishing in the periods of fast average GDP growth, followed by a rapid increase in 2009 and 2010 when most countries faced growth in unemployment as a result of recession.

Table 1. **Expenditure on ALMP (2-7) in the EU transition countries (% of GDP)**

GEO/TIME	2005	2006	2007	2008	2009	2010
EU27	0.507	0.503	0.463	0.466	0.536	n/a
EU15	0.525	0.521	0.480	0.484	0.554	n/a
EU10 (transition countries)*	0.192	0.191	0.171	0.161	0.232	0.228[1]
Bulgaria	0.406	0.370	0.286	0.253	0.224	n/a
Czech Republic	0.128	0.159	0.172	0.152	0.169	0.226
Estonia	0.047	0.049	0.028	0.035	0.149	0.142
Latvia	0.162	0.186	0.108	0.078	0.272	0.513
Lithuania	0.146	0.177	0.228	0.139	0.200	n/a
Hungary	0.203	0.193	0.183	0.185	0.358	n/a
Poland	0.356	0.359	0.404	0.468	0.526	n/a
Romania	0.108	0.100	0.076	0.060	0.041	0.029
Slovenia	0.194	0.175	0.111	0.093	0.230	n/a
Slovakia	0.168	0.143	0.116	0.150	0.150	n/a
SERBIA	**0.040**	**0.070**	**0.100**	**0.110**	**0.120**	**0.120**

* unweighted average;
1 − incomplete data;
Source: Eurostat (2012) and own calculations based on MERR (2011).

Consolidated data on expenditures on ALMP in Serbia go back to 2008, which coincides with the end of the development of new information system in NES. In order to make a comparison of the expenditure on ALMPs, we have used the data from the Eurostat database (Table 1). The data on Serbia are available for 2011 as well and they amount to 0.17% of GDP. Unlike in other transition countries, ALMP budgets have been steadily increasing for the whole observed period. However, despite such growth they are still substantially lower than average of 0.23% in other transition countries of the EU.

Macro data from the empirical research. As explained in the methodological section, we have rearranged the data from NES classification to EC methodology. The data on the number of persons included in different types of LM measures according for the period 2008-2011 are listed in Table 2.

Table 2. **Persons included in ALMP measures**

ALMP Code	ALMP Measures**	2008	2009	2010	2011
	No ALMP	*825,956*	*767,277*	*794,016*	*768,311*
2-7	*With ALMP*	*24,438*	*27,241*	*23,262*	*29,798*
2.1-2.3	Training	1,851	2,699	4,312	3,596
2.4	Training	2,963	7,773	5,706	9,870
3	Job rotation and job sharing	0	0	0	0
4	Employment incentives	12,482	7,309	6,486	7,138
5	Supported employment	0	40	858	1,585
6	Direct job creation	3,854	6,150	3,471	4,034
7	Start-up incentives	2,701	2,967	2,236	3,275
	Combined*	587	303	193	300
	*Total***	*850,394*	*794,518*	*817,278*	*798,109*

* Persons participating in over 1 measure
** Further on we will not list the names of the measures but only their codes
*** Includes all persons listed at NES as of Jan 1st of the current year

Further on we have summed all the expenditures for the groups of persons listed in Table 2, by types of ALMP (Table 3).

Table 3. **ALMP expenditures (in EUR)**

ALMP Measures	2008	2009	2010	2011
No ALMP	*0*	*0*	*0*	*0*
With ALMP	*15,555,102*	*25,685,579*	*23,958,642*	*44,156,260*
2.1-2.3	297,558	495,211	2,459,720	2,621,963
2.4	655,615	9,944,044	7,663,284	14,461,451
3	0	0	0	0
4	8,224,734	4,859,086	4,900,848	11,749,142
5	0	42,015	723,827	2,957,996
6	3,525,069	7,940,810	4,922,759	6,852,196
7	2,286,840	2,008,454	2,960,905	4,888,984
Combined	565,285	395,959	327,300	624,504
Total	15,555,102	25,685,579	23,958,642	44,156,260

Using the methodology presented above, we have analyze the effectiveness of the funds spent for ALMP. For that reason we have collected information on employment of people from our sample in twofold manner. For those who have not used any ALMP we gathered information on number of persons being employed during respective year (for at least one day) and the total number of days of employment. For persons who have participated in any ALMP, we gathered the same information but for the period of 12 months after entering the measure. The results are presented in Table 4.

After completing collection of the aggregated data, we could summarize it in 3 sentences. Over the four-year period there has been an increase of 20% in number of persons who were included in some (or several) programs of active labour market policies. In the same period total expenditure on financing those policies has increased by nearly 200%. However, the effectiveness of that increase in expenditure was accompanied by a modest increase of around 10% measured in number of persons who were employed and total number of days in a respective year they have been employed.

Table 4. **Employment by number of persons and working days**

	2008		2009		2010		2011	
	Persons employed	Days working	Persons employed	Days working	Persons employed	Days working	Persons employed	Days working
No ALMP	*110,063*	*19,694,841*	*72,591*	*12,460,764*	*82,253*	*14,327,121*	*107,717*	*16,881,759*
With ALMP	*18,064*	*5,162,352*	*22,005*	*6,123,127*	*14,846*	*4,186,389*	*20,600*	*5,640,819*
2.1-2.3	663	131,108	611	98,488	952	218,784	1,499	428,190
2.4	1,944	561,328	7,592	2,363,666	4,280	1,408,452	6,048	1,904,092
3	0	0	0	0	0	0	0	0
4	10,841	3,561,978	6,895	2,287,067	5,915	2,004,103	7,083	2,338,293
5	0	0	15	2,076	103	23,078	1,279	257,782
6	3,651	606,593	6,051	1,087,727	3,290	440,640	4,320	597,329
7	509	150,542	559	196,223	150	50,983	102	31,291
Combined	456	150,803	282	87,880	156	40,349	269	83,842
Total	128,127	24,857,193	94,596	18,583,891	97,099	18,513,510	128,317	22,522,578

Discussion on microdata and econometric testing. In order to give robustness to our research we have conducted a test using a matched pair design explained in the methodological section. From the total population, we have used a sample of 17,943 persons who have exit from ALMP they participated in the period 01 Jan 2011 - 30 June 2011. In Table 5 there is information on the matching process and similarity of experimental and control groups measured by 5 variables.

Table 5. **Similarity test of experimental and control groups by 5 variables**

Rank	Variable	Number of categories	Matching share (in %)	Mismatching (in units)
1	Gender	2	100 %	0
2	Region	30	100%	0
3	Education	10	99.8%	24
4	Age	10	100%	0
5	Occupation	19	97.09%	522
	All 5 variables		96.99%	540

As seen in Table 5, for only 3% of persons from the sample of experimental group were not possible to find the absolute match by all 5 variables. In that case as suggested by Ognjenovic (2007, p. 30) it has been used a method of nearest neighbor. We can conclude that the matching process has been successfully completed.

In this way we have created 17,943 pairs for whom we gathered information on two different outcomes. First one, as noted before, is the employment status 3 months after the date of exit from the program (Table 6). The second is the number of days (and business sector by NACE 2.rev classification) person was employed in the period of 6 months after exiting the program (Table 7).

We must draw attention that in this analysis we have not determined the level of deadweight, substitution effects and displacement effects. That is something which remains to be performed in the continued research in order to make the results as most robust as possible. Despite those drawbacks the results shown in Table 6 prove very high effectiveness of the measures financed on Serbian NES. The weakest effects are observed in the category of start-up incentives (7) where the members of experimental group had employment on the day 3 months after exiting from the treatment by 40% higher than the control group. The best results are present in the group train-

ing — special support for apprenticeship where over 400% higher employability 3 months after the exit from the program is registered.

Table 6. **Frequency and structure of the first outcome (employment 3 months after exit)**

ALMP code	Group		Number of persons — 3 months after exit		Total
			Employed	Unemployed	
2.1-2.3	Experimental	Frequency	1106	527	1633
		Share (%)	67.7%	32.3%	100.0%
	Control	Frequency	252	1381	1633
		Share (%)	15.4%	84.6%	100.0%
2.4	Experimental	Frequency	4404	1290	5694
		Share (%)	77.3%	22.7%	100.0%
	Control	Frequency	963	4731	5694
		Share (%)	16.9%	83.1%	100.0%
3	Experimental	Frequency	0	0	0
		Share (%)	-	-	-
	Control	Frequency	0	0	0
		Share (%)	-	-	-
4	Experimental	Frequency	4862	1478	6340
		Share (%)	76.7%	23.3%	100.0%
	Control	Frequency	2231	4109	6340
		Share (%)	35.2%	64.8%	100.0%
5	Experimental	Frequency	46	6	52
		Share (%)	88.5%	11.5%	100.0%
	Control	Frequency	9	43	52
		Share (%)	17.3%	82.7%	100.0%
6	Experimental	Frequency	9	9	18
		Share (%)	50.0%	50.0%	100.0%
	Control	Frequency	0	18	18
		Share (%)	0.0%	100.0%	100.0%
7	Experimental	Frequency	1754	2452	4206
		Share (%)	41.7%	58.3%	100.0%
	Control	Frequency	1249	2957	4206
		Share (%)	29.7%	70.3%	100.0%
Total	Experimental	Frequency	12181	5762	17943
		Share (%)	67.9%	32.1%	100.0%
	Control	Frequency	4704	13239	17943
		Share (%)	26.2%	73.8%	100.0%

Significantly different results are generated when calculating the second outcome (Table 7). If instead of looking at the employment status on the day of 3 months after exiting the treatment we observe the number of days the same person has been employed in the period of 6 months (182,5 days) after the exit we can see that the effects of ALMP are reduced. As long as 67.9% of the persons treated were employed 3 months after exit, they have been employed for only 40% of days in the period of 6 months after the exit. If we look at the control group, the difference is significantly smaller. There is a drop from 26% of people employed on the exact day 3 months after exit, as long as they have been working for around 24% of the days in the period of 6 months. Hence, we can conclude that the effectiveness of ALMP measured by the first outcome which showed gains of nearly 160% is significantly lower if measured by the second outcome and it equals 69%. That is certainly not an unimportant effect,

but it does not cover the above named effects of deadweight, substitution and displacement. At this stage we were not able to estimate the impact of those three effects, so we will continue with our analysis as it is.

Table 7. **Frequency and structure of the second outcome (days employed in the period of 6 months after exit) of matched pairs in Serbian NES, 2011**

ALMP code	Group		Number of days — period of 6 months after exit		Total
			Employed	Unemployed	
2.1-2.3	Experimental	Frequency	164467	133555,5	298023
		Share (%)	55,2%	44,8%	100,0%
	Control	Frequency	42250	255772,5	298023
		Share (%)	14,2%	85,8%	100,0%
2.4	Experimental	Frequency	734569	304586	1039155
		Share (%)	70,7%	29,3%	100,0%
	Control	Frequency	168032	871123	1039155
		Share (%)	16,2%	83,8%	100,0%
3	Experimental	Frequency	0	0	0
		Share (%)			
	Control	Frequency	0	0	0
		Share (%)			
4	Experimental	Frequency	244460	912590	1157050
		Share (%)	21,1%	78,9%	100,0%
	Control	Frequency	363499	793551	1157050
		Share (%)	31,4%	68,6%	100,0%
5	Experimental	Frequency	7484	2006	9490
		Share (%)	78,9%	21,1%	100,0%
	Control	Frequency	1480	8010	9490
		Share (%)	15,6%	84,4%	100,0%
6	Experimental	Frequency	974	2311	3285
		Share (%)	29,6%	70,4%	100,0%
	Control	Frequency	0	3285	3285
		Share (%)	0,0%	100,0%	100,0%
7	Experimental	Frequency	164073	603522	767595
		Share (%)	21,4%	78,6%	100,0%
	Control	Frequency	200735	566860	767595
		Share (%)	26,2%	73,8%	100,0%
Total	Experimental	Frequency	1316027	1958571	3274598
		Share (%)	40,2%	59,8%	100,0%
	Control	Frequency	775996	2498602	3274598
		Share (%)	23,7%	76,3%	100,0%

Setting the second outcome as more reliable, we will continue with our analysis only by using that data. Further on we will show the effectiveness of ALMP on women and youth population (15-24). We will also exclude the data on frequency and continue with presenting only the share in total.

First of all, let us see the distribution of women and youth among participants in ALMP (Table 8).

As one can see from Table 8, there are significant differences in distribution in different types of active measures. That is not surprising since the design of some treatments is strictly made for women or youth population. However, it is interesting to note that women comprise the majority of participants in training, whereas in other types are mostly below 50%. On average, women are evenly included in measures as

men. Youth population comprise only 1/3 of the total participants in ALMP. Their share is high only in special support for apprenticeship and supported employment.

Table 8. **Distribution of women and youth population among participants in ALMP**

ALMP code		Total	Women	Youth
2.1-2.3	Frequency	1,633	1,054	370
	Share (%)	100.0%	64.5%	22.7%
2.4	Frequency	5,694	3,017	3,121
	Share (%)	100.0%	53.0%	54.8%
3	Frequency	0	0	0
	Share (%)	-	-	-
4	Frequency	6,340	3,197	2,146
	Share (%)	100.0%	50.4%	33.8%
5	Frequency	52	22	25
	Share (%)	100.0%	42.3%	48.1%
6	Frequency	18	6	5
	Share (%)	100.0%	33.3%	27.8%
7	Frequency	4,206	1,663	454
	Share (%)	100.0%	39.5%	10.8%
Total	Frequency	17,943	8,960	6,126
	Share (%)	100.0%	49.9%	34.1%

Let us now review the effectiveness of women and youth participants compared to the total (Table 9).

Table 9. **Comparison of the effectiveness of ALMP on women and youth against total**

ALMP code	Group	Total		Women		Youth	
		Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
2.1-2.3	Exp.	55,2%	44,8%	56,0%	44,0%	55,0%	45,0%
	Con.	14,2%	85,8%	13,2%	86,8%	17,1%	82,9%
2,4	Exp.	70,7%	29,3%	70,4%	29,6%	68,4%	31,6%
	Con.	16,2%	83,8%	16,6%	83,4%	13,0%	87,0%
3	Exp.	-	-	-	-	-	-
	Con.	-	-	-	-	-	-
4	Exp.	21,1%	78,9%	21,5%	78,5%	22,0%	78,0%
	Con.	31,4%	68,6%	31,9%	68,1%	38,2%	61,8%
5	Exp.	78,9%	21,1%	63,9%	36,1%	70,8%	29,2%
	Con.	15,6%	84,4%	18,1%	81,9%	13,9%	86,1%
6	Exp.	29,6%	70,4%	16,8%	83,2%	10,2%	89,8%
	Con.	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%
7	Exp.	21,4%	78,6%	21,6%	78,4%	18,2%	81,8%
	Con.	26,2%	73,8%	26,5%	73,5%	26,8%	73,2%
Total	Exp.	40,2%	59,8%	42,1%	57,9%	47,6%	52,4%
	Con.	23,7%	76,3%	23,5%	76,5%	23,1%	76,9%

When looking on the last two rows of the table it is easy to see that both women and especially youth show better results as compared to the total sample of 17,934 persons who participated in ALMP in the first half of 2011. This is not a result of achieving better results than average in any specific group of measures, but it was rather the result of greater participation in measures which in general showed better results, like Special support for apprenticeship and Supported employment.

Conclusions. This comprehensive and extensive research has shown some very important results which might significantly alter the decision process on selection of the persons to participate in ALMP. Firstly, we need to draw attention to the fact that there is a significant difference in the results of two different outcomes, where looking at the number of days person taking part in ALMP has been employed in the period of 6 months after the exit from treatment gives much more precise results. At second we have shown that matching process results in very high level of similarity of the experimental and control group members with nearly 97% marching of the 5 observed variables. Further on we have seen substantial differences in the achieved effectiveness among persons taking part in different groups of measures. Especially poor results, with control group performing much better are shown for ALMP groups 4: Employment incentives and 7: Startup incentives, as long as all types of training show extremely positive results. Finally, we have shown that women and youth are playing important role in the active policies, and that the results they achieve are better than average, mostly due to the fact that they are not massively taking part in treatments that in general show weak results.

Finally, it is important to note that findings of this research to some extent coincide with the findings of the researches conducted in a different environment, i.e. in more developed countries and by using different methodologies. For example, Kuttim et al. (2011) note that "the best way of developing human capital is ... through combination of education and experience". This opens a completely new field to perform comparative study in order to verify our findings.

It is also important to note that the results of this research need to be combined with the results presented in the paper by Zubovic and Simeunovic (2012) in order to gain precise information on the cost-benefit effectiveness of the ALMP performed in Serbia in the period of deep recession.

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