Evaluation of the Active Labour Market Policy in Serbia: “Severance to Job”

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Summary

- The paper evaluates the treatment effect of the active labour market policy (ALMP), “Severance to Job” (StJ), implemented in Serbia from November 2006 until August 2009.
- The programme assisted redundant workers in finding new employment by relying on severance payment packages.
- Programme participation has:
  - **Significant effect** on main labour market outcomes (employment and unemployment probabilities).
  - **No significant effect** on subjective improvement in personal life (self-assessed well-being and life satisfaction).
- The StJ programme and its evaluation allow for a better-informed policy making in labour and employment fields in transition and emerging market economies in general, and Serbia in particular.
Road Map
Characteristics of the Serbian Labour Market Preceding the StJ Programme Creation

- Lack of employment opportunities and low levels of job creation
  - Unemployment rate (LFS): 14.6% (2003); 18.5% (2004); 20.9% (2006)
  - Over the same period, employment and participation rates fell slightly.

- Restructuring of large public enterprises
- Privatization of socially owned enterprises
  - Number of redundant workers (NES): 43,000 (2006); 60,000 (2007)

- Necessity to complement the ongoing enterprise restructuring and privatization process with a pro-active employment policy with active labour market policy (ALMPs) at its core.
  - %GDP spent on ALMP: Serbia (0.28%), EU (0.9%)
  - More than 90% of NES total expenditures goes on unemployment benefits and other passive measures.
ALMP “Severance to Job”

• StJ is an active labour market programme (ALMP) aimed to preserve high employment and participation rates of experienced workers, by providing re-employment opportunities for those among them who have lost or are about to lose their jobs in the process of privatization and restructuring.

• Two main goals:
  1. Re-employment of redundant workers through provision of incentives for a productive use of severance payments;
  2. Improvement of the NES long-term capacity to plan, implement and monitor nation-wide active labour market programmes.
StJ project was implemented by the United Nations Development Programme’s (UNDP) Central Project Team (CPT) in close collaboration with the National Employment Service (NES) and the Ministry for Economy and Regional Development (MoERD).

Initial funds for the Project implementation were provided by the Austrian Development Agency (ADA). In addition to ADA funding, the Government of the Republic of Serbia substantially supported the Project in the period 2007-2009.
ALMP “Severance to Job,” Cont’d

• The StJ project is in line with national strategy on poverty reduction and UN Millennium Development Goals (MDGs):
  – Promotion of economic growth,
  – Prevention of emergence of new poverty among the ‘losers’ in transition, including redundant workers.

• The project in line with the recommendations for increasing job opportunities made in the 2005 Review of the Implementation of MDGs in Serbia.
ALMP “Severance to Job,” Cont’d

• StJ offered redundant workers an attractive menu of opportunities for productive investment of their severance pay, i.e. to turn what is perceived to be a typical *passive measure* (additional consumption; other non-productive purposes) into an *active one* (employment).

• Two distinctive components of StJ:
  – Re-employment of redundant workers with a **new employer**.
  – Re-employment of redundant workers through their **self-employment**.

• Within *re-employment with a new employer*, redundant workers could invest their severance pay or part of it:
  a) to fund equipment for their new working place;
  b) to acquire additional training required for their new job;
  c) to cover the costs of obligatory social security taxes.

• Within *re-employment through self-employment*, additional funding was provided for the most vulnerable redundant workers.
Programme Participants and Firms

• **Labour force members eligible for participation:**
  – made redundant by their former employers not earlier than 09/2006;
  – received or were about to receive a severance payment;
  – expressed readiness to invest severance money into own re-employment.

• **Firms eligible for participation:**
  – privately owned;
  – redundant workers would be hired through the project in order to:
    1) increase total employment in the firm or
    2) to replace retirees and those who have left voluntarily.

• **Geographical coverage** of the project is nation-wide, both for members of the work force (workers) and firms (employers).
Programme Participants

- Project participation included signing a contract with 24-month duration.

- Out of the total 1,947 participants, 416 found jobs with new employers and 1,531 used the severance pay for self-employment.

- A total of 1,560 beneficiaries were interviewed face-to-face by professionals from the Centre for Free Elections and Democracy (CeSID) in 2010.

- The contractual obligation had ended for 484 out of them (31%). The latter constitutes the size of our treatment group.
Characteristics of Programme Participants

- **Gender:** male (61%), female (39%) beneficiaries.
- **Average age:** 47.6 years (more than 40% over 50 years of age).
- **Average work experience:** 23 years
  - acquired at their last place of work, prior to beneficiary being named redundant or company bankruptcy
  - majority had tenure in only one long-term job (job security)
- **Education:** most completed secondary vocational school lasting 3 or 4 years (42.9% and 28.7% respectively).
- **Financial situation in 2009:**
  - bad or very bad (50.49%);
  - worse or much worse compared to the period prior to job loss (34.34%);
  - improved, to some extent (better or much better) (23.35%).
- **Satisfaction with life in general:**
  - satisfied (56%); dissatisfied (38%).
Characteristics of Prog. Participants, Cont’d

• **Labour market status** (contract ended/all prog. participants):
  – employed (73%, 90% in total);
  – unemployed (21%, 8% in total)
  – inactive (6%, 2% in total).

• **Industry sector:** the largest number of programme participants previously worked in manufacturing (47%), followed by trade (11.7%). Similar trend is followed during the project.

• **Salary pattern** before/during the project:
  – Before: didn’t regularly receive salary (44%); needed additional job (38%)
  – During: regularly received salary (71%); needed additional job (23%)

• **Current employment:** still employed/plans to stay employed at the job obtained within the project (65%)

• **How did they find out about the programme?** NES counsellors (68%), friends and colleagues (16%), media (12%), other (3%), job market (1%).
Evaluation Methodology: Literature

• A small body of literature analysing the effectiveness of ALMP in transition economies in general, and Serbia in particular:
  – Lehmann & Kluve (2008), an overview.

• Only other paper which provides a comprehensive net impact evaluation of ALMP in Serbia and Montenegro is by Bonin and Rinne (2006).

• StJ according to Lehmann & Kluve (2008), “OECD categorization”:  
  – **Type of programme**: 1) Employment 2) Start-up incentive 
  – **Generic purpose**: 1) Improve job matching process (unemployed/vacant jobs) 2) Increase labour demand 

• Two approaches:
  – Macroeconometric, uses aggregated administrative data. 
  – Microeconometric, based on individual level data (eg, unemployment registers; labour force surveys)
Evaluation Methodology

Evaluate treatment effects of the StJ policy, by comparing participants (treatment group) and non-participants (control group) on the base of:

1. Labour market outcomes:
   - unemployment probability
   - employment probability
   - non-activity
   - average net wage in 2009

2. Subjective well-being outcomes:
   - subjective evaluation of financial situation in 2009
   - current subjective evaluation of financial situation as compared to the situation before job loss
   - chances to find a job
   - subjective welfare and life satisfaction.
Evaluation Methodology, Cont’d

• For a correct assessment of programme effects, it is important to “compare the comparable” (Heckman et al., 1999).

• Compare programme participants (treatment group) to those non-participants who could have also participated in the programme (control group).

• Two methods to estimate the counterfactual situation:
  – randomized experiments;
  – non-experimental (quasi-experimental) methods.

• The StJ policy has been constructed to mimic an ex-post experimental situation (construct a control group that resembles the treatment group as much as possible).

• For each member of the treatment group, a matched partner with the same observable characteristics was drawn from the NES registers.
Evaluation Methodology, Cont’d

- Statistically test whether the means of important socio-demographic characteristics are significantly different between treatment and control groups.

- **Reject the hypothesis of random assignment!**

- Treatment and control groups are significantly different in terms of important socio-demographic characteristics. That is, it seems that treatment group is better positioned on the labour market when compared to control group.

- Net effects of the programme *cannot* be computed as the difference in the average outcomes between participants and non-participants.
Nearest Neighbour Matching Approach

- **One-to-one nearest neighbour matching with replacement:**
  - a non-experimental method relying on individual probabilities of programme participation
  - enables a choice of the correct control group and estimation of unbiased effects of programme participation

- Two steps:
  1. **Probit regression**: estimate individual probabilities to participate in the programme or not, depending on a set of observable characteristics
  2. **Propensity score matching**: match participants and non-participants on the base of these estimated probabilities.

- If the matching approach is successful in mimicking a randomized experiment, any differences in observable characteristics between treatment and control groups should disappear.

- Evaluate programme impacts by comparing mean outcomes between treatment and control groups.
Average Treatment Effect on the Treated (ATT)

- Outcome variables are based on the labour market status at the time of the interview (survey data do not trace individuals’ employment histories).
- Focus on the *average treatment effects on the treated* (ATT).
- It measures the average effect of the intervention on the group of individuals who participated in the programme.
- For example, ATT represents the difference between the actual employment rate of participants post programme and the counterfactual employment rate of participants supposing they would not have received the treatment.
- Importantly, the ATT captures the causal effect of the programme on the analysed outcomes.
Estimated effect of participation in the StJ programme, compared to a situation of not participation in the programme on:

1. **probability of employment:** increases by 44 pp
2. **probability of unemployment:** decreases by 42.5 pp
3. **probability of being non-active:** decreases by 2 pp; this effect is relatively small and not statistically significantly different from zero.
4. **average net wage data in 2009:** due to a poor quality and a relatively small number of observations on this covariate, estimated programme effects are less robust than for other labour market outcomes.
Programme Effects: Subjective Well-Being

• Programme participants were requested to compare their situation at the time of the interview with that before the StJ programme came into effect, and had to judge whether their situation has strongly or somewhat improved, has stayed more or less the same, or has strongly or somewhat deteriorated.

• The general impression is that programme participation has improved the personal situation with regard to all aspects of life considered, except for self-assessment of financial situation in 2009, which stayed the same.

• In contrast to the impact on labour market outcomes, the programme effects on subjective well-being outcomes are not substantial and also not statistically significant.
Programme Effects: Subjective Well-Being, Cont’d

Estimated effect of participation in the StJ programme, compared to a situation of not participation in the programme on:

1. **current financial situation**: increases by 7 pp
2. **self-assessed chances to find a job**: increases by 5 pp
3. whether their situation has somewhat (“winner”) or not at all (“looser”) improved in the last 4-5 years: increases by 7 pp
4. **life satisfaction**: increases by 2 pp
Conclusions & Follow Up Work

• This paper causally evaluates net impact of the StJ ALM policy on the analysed outcomes.
• We show how analysed outcomes changed for programme participants, compared to a situation where they would not have received the treatment.
• We find:
  – positive significant effects of programme participation on main labour market outcomes (employment and unemployment probabilities)
  – positive, but not statistically significant effects on subjective improvement in personal life (e.g., self-assessed well-being and life satisfaction).
• Our findings are in contrast to Bonin and Rinne (2006), who find stronger effects of “Beautiful Serbia” (BS) ALMP on subjective well-being rather than labour market outcomes.
• The reason might be due to different age groups of people treated by the BS (mean age = 32) compared to StJ (mean age = 47).
Conclusions & Follow Up Work, Cont’d

- The treatment effects estimated for the StJ programme allow only tentative conclusions, because we observe the data at the comparatively short time period after treatment.

- Robust econometric analysis of the STJ project effects should ideally be performed after all participants have exited the project.
  - This is probably a main drawback of our findings, since majority of the StJ project participants are still undergoing the treatment, thus making sample sizes that we worked with relatively small.

- Lehmann & Kluve (2008): To what extent labour market policies developed in mature market economies could be legitimately implemented in the context of transitional labour markets?
  - Evaluations of efficacy of ALMP in the latter is necessary
  - Cost-benefit analysis...
THANK YOU FOR YOUR ATTENTION!!

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Probit Estimation Results

• Programme participation is:
  – lower for women and higher for older participants.
  – decreases for households with more retired household members and
    with more members of household able to work.
  – higher if a person works in the place of living and if a person had an
    additional job during previous job.
  – higher if a person works in transport, public administration or health and
    social work industry sectors.

• Probit results suggest that the StJ programme has reached its
  intended target group very well:
  – A group of older labour force members, whose life-long employment
    contracts ended because they were in the group of surplus workers or
    due to firm bankruptcy, and those with low educational levels.
Distribution of Propensity Scores and Common Support

![Distribution of Propensity Scores and Common Support](image_url)
## Sample Size

<table>
<thead>
<tr>
<th>Type of treatment</th>
<th>Treatment group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in the StJ programme</td>
<td>484 obs.</td>
<td>977 obs.</td>
</tr>
<tr>
<td><strong>Treated vs untreated</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td># treated individuals</td>
<td></td>
<td>135</td>
</tr>
<tr>
<td># treated individuals off support</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td># matched pairs</td>
<td></td>
<td><strong>127</strong></td>
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<tr>
<td>Mean SB before matching</td>
<td>13.345</td>
<td></td>
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<td>Mean SB after matching</td>
<td>10.683</td>
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<tr>
<td>Pseudo R² before matching</td>
<td>0.164</td>
<td></td>
</tr>
<tr>
<td>Pseudo R² after matching</td>
<td>0.097</td>
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Table 8: Program impacts on unemployment and employment probabilities for treatment and control groups.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample</th>
<th>Treated</th>
<th>Controls</th>
<th>Difference</th>
<th>t-test</th>
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<tbody>
<tr>
<td><strong>Labour market outcomes</strong></td>
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<tr>
<td>Employed</td>
<td>Unmatched</td>
<td>0.718</td>
<td>0.248</td>
<td>0.470</td>
<td>10.06</td>
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<td>ATT</td>
<td>0.724</td>
<td>0.283</td>
<td>0.441</td>
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<td>Unemployed</td>
<td>Unmatched</td>
<td>0.222</td>
<td>0.638</td>
<td>-0.416</td>
<td>-8.48</td>
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<td>ATT</td>
<td>0.213</td>
<td>0.638</td>
<td>-0.425</td>
<td>-5.93</td>
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<td>Non-active</td>
<td>Unmatched</td>
<td>0.059</td>
<td>0.114</td>
<td>-0.055</td>
<td>-1.76</td>
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<td>ATT</td>
<td>0.063</td>
<td>0.079</td>
<td>-0.016</td>
<td>-0.38</td>
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<tr>
<td>Average net wage in 2009†</td>
<td>Unmatched</td>
<td>22611</td>
<td>30366</td>
<td>-7754</td>
<td>-1.10</td>
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<td>ATT</td>
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<td>78364</td>
<td>-57710</td>
<td>-2.60</td>
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<td><strong>Subjective well-being</strong></td>
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<td>Financial situation in 2009</td>
<td>Unmatched</td>
<td>0.044</td>
<td>0.047</td>
<td>-0.003</td>
<td>-0.12</td>
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<td>ATT</td>
<td>0.039</td>
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<td>Current financial situation‡</td>
<td>Unmatched</td>
<td>0.207</td>
<td>0.079</td>
<td>0.129</td>
<td>3.73</td>
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<td>0.213</td>
<td>0.142</td>
<td>0.071</td>
<td>1.35</td>
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<tr>
<td>Chances to find a job†</td>
<td>Unmatched</td>
<td>4.167</td>
<td>4.375</td>
<td>-0.208</td>
<td>-0.95</td>
</tr>
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<td>ATT</td>
<td>4.263</td>
<td>4.210</td>
<td>0.053</td>
<td>0.12</td>
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<td>Winner or looser?†</td>
<td>Unmatched</td>
<td>0.156</td>
<td>0.075</td>
<td>0.081</td>
<td>2.51</td>
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<td>0.157</td>
<td>0.087</td>
<td>0.071</td>
<td>1.47</td>
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<td>Life satisfaction</td>
<td>Unmatched</td>
<td>0.489</td>
<td>0.405</td>
<td>0.083</td>
<td>1.58</td>
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<td>0.496</td>
<td>0.472</td>
<td>0.024</td>
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