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Evaluation of services in the programme *Increasing the supply of qualified labour 2007-2013*

Interim evaluation of wage subsidies and labour market training^ξ

Sten Anspal
Kristel Jääts
Janno Järve
Epp Kallaste
Kirke Maar
Annemai Mägi
Anna Toots



Euroopa Liit
Euroopa Sotsiaalfond



Eesti tuleviku heaks

The Estonian Centre for Applied Research (CentAR)
InterAct Projektid & Koolitus OÜ

April 2012

^ξ This study was commissioned by the Estonian Ministry of Social Affairs.

Executive Summary

The aim of this study was to carry out an interim¹ evaluation of the services of **labour market training** and **wage subsidies** offered from the programme *Increasing the supply of qualified labour 2007-2013*, which is funded from the European Social Fund. The relevance, effectiveness, sustainability and, where possible, also efficiency of the services was evaluated.

To carry out the evaluation, different sources of data were combined. To obtain information on subjective opinions on the services, training providers and companies that had received wage subsidies were interviewed. A survey was carried out among the people who had been unemployed during the time period under review, including both recipients of the respective services and non-recipients. In order to evaluate the effectiveness of the services, the administrative dataset of the Unemployment Insurance Fund (UIF) was linked to that of the Tax and Customs board, enabling us to compare employment and wage outcomes for programme participants and non-participants with similar characteristics.

In order to evaluate the effectiveness and efficiency of the programme and sustainability of its impact, administrative data from the UIF (data on age, sex, education, region, time of participation) was linked with data on employment and wages. Due to data protection regulations, it was possible to use only observations for those people for whom the specific combination of the characteristics was found for at least three people, in order to avoid the possibility of indirect identification of a person.

Using coarsened exact matching on the above-mentioned characteristics as well as pre-unemployment employment patterns² and wage levels, it was possible to obtain matched samples of 747 participants of wage subsidy and 596 participants in labour market training. Each participant in the sample was matched to at least one control group observation. The control group from which the matches were found consisted of all people who were registered unemployed at the time of either the end of the wage subsidy or the start of the labour market training programme, again excluding those whose particular combination of characteristics was found in less than three persons.

Based on the matched treatment and control group samples, the **effectiveness** of the measure by finding the average effect of treatment on the treated was evaluated. This was calculated as the difference between the two groups' employment rates and wages at 6 months after the exit from the wage subsidy programme or after entry into training. To evaluate the **sustainability** of the employment impact of the measures, the authors similarly compared the development of

¹ The time periods considered were January 1, 2008 to May 31, 2011 in the case of wage subsidies and January 1, 2009 to May 31, 2011 in the case of labour market training.

² The pre-unemployment employment pattern was defined as the quarterly sequence of episodes of employment and non-employment in the four quarters prior to becoming unemployed. For example, if a person had been employed for two quarters before unemployed and unemployed prior to that, the variable would take the value "EENN". The methodology used is similar to the one used in Kluve, Lehmann and Schmidt (2008): *Disentangling Treatment Effects of Active Labor Market Policies: The Role of Labor Force Status Sequences*. Labour Economics 15 (2008), 1270–1295.

employment rates from 1 to 12 months after the respective time periods mentioned above. **Efficiency** was evaluated in the framework of a cost-benefit analysis, taking into account programme costs, labour market benefits, employment, and wage income and tax revenue during the period until the end of 2011, i.e. up to 23 months subsequent to programme participation. For evaluating the efficiency of the programme entry was used as a reference point for both training as well as wage subsidy. This allows taking into account possible locking in effects.

Wage subsidies

Wage subsidy is a measure for employers,³ in order to create an incentive for them to employ the registered unemployed. In general, wage subsidies are targeted to risk groups such as long-term (over 12 months, over 6 months in case of young) unemployed or those recently released from incarceration. However, in 2010, the conditions of the programme were changed and also those who had been unemployed for at least 6 months (3 months in case of young unemployed) became eligible for wage subsidy. In addition to the prevention of long-term unemployment and preservation of jobs, the aim of this change was to stimulate job creation more strongly during the recession. Also, compared to previous periods, a significantly greater amount of funding was directed into wage subsidies—in 2010, subsidies made up about 42% of the total budget for active labour market programmes.

Wage subsidy compensates for the employer 50% of the gross wage of the hired formerly unemployed person. There is also a ceiling on the maximum monthly amount of subsidy allowed. In the period under review, it was about EUR 278, the minimum wage at the time.

Among the results of the evaluation, the first that should be mentioned is that qualitative assessments of the administrative organisation of wage subsidies and the operation of the Unemployment Insurance Fund were generally positive among employers as well as employees.

The evaluation results from the quantitative framework are positive regarding effectiveness and sustainability as well as efficiency. The best indicator to characterise the effectiveness and sustainability of the impact of the programme is the difference in employment rates between participant and the control groups. Six months after exit from the programme, the probability of being employed is about 56 percentage points higher for participants than for the control group. Over time, the difference diminishes, but even 18 months after exit from the programme, participants' employment rate remains over 30% higher than the control group. Efficiency calculations (in the cost-benefit framework) indicate that one euro invested in wage subsidies results in 7 euros of returns, of which 2.8 euros is revenue for the state from direct taxes. Such a benefit-cost ratio can be considered very high.

³ Although wage subsidy is paid to *employers*, hereafter the authors refer to subsidised *employees* as participants in the programme.

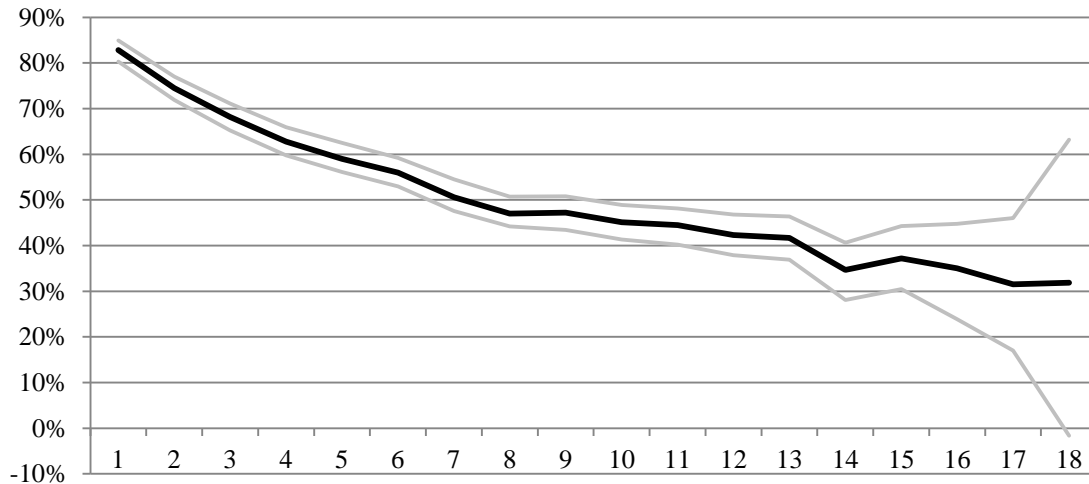


Figure 1. Differences in the probability of being employed for wage subsidy programme participants and matched control group, 1 to 18 months after exit from the programme.

* *Light grey lines indicate 95% confidence intervals.*

There are, however, important limitations regarding the conclusions that can be drawn from the above. Data available to us enabled to estimate the difference between participants’ and non-participants’ employment rates. In reality, the impact of wage subsidies could be wider—since the amount of the wage subsidy offered by the Unemployment Insurance Fund is substantial in case of low-wage jobs (making up up to 50% of the wage), subsidies may crowd out other employed people with similar levels of qualification. It is also possible that people who were hired with wage subsidies, would have been hired even without it. It was not possible to take these effects into account in this study (data requirements for estimating such effects would substantially exceed the possibilities of this study), but their presence can significantly reduce the actual benefit-cost ratio of the programme. It should also be mentioned that although the data used by researchers included the most important socio-demographic characteristics that should ensure the comparability of the participant and control groups, but it cannot be excluded that there are other important unobservable characteristics (e.g. personality traits, motivation, cognitive ability) that affect both participation in the programme and subsequent labour market performance. Not taking these into account could potentially lead to overestimating the efficiency of the programme.

Despite the excellent performance indicated by quantitative measures, some questions regarding its organisation can be raised. The relaxed eligibility conditions that were applied from January to December 2010 widened the focus of the programme from long-term unemployed to include those who had been unemployed for a relatively short period of time. Considering that it was a year of deep recession, the aim of the changed eligibility conditions—to transform a measure for returning risk groups to (at least temporary) employment into a measure supporting job creation—is understandable. This, however, has its side effects: in an economic crisis, the situation of the long-term unemployed is even worse than before, since the pool of all unemployed now includes people with fresh labour market experience who have an advantage in competing for available jobs. Keeping the focus of wage subsidies strictly on risk groups

would have compensated for the risk groups' disadvantage and their reduced employment opportunities. This is primarily an issue of value judgments, however, and it should also be kept in mind that despite expanding the target group of the programme, the overall amount of funding for the programme increased more than tenfold compared to 2008-2009 and thus, opportunities for subsidised employment increased significantly also for risk groups.

Another issue needing discussion is the concentration of subsidised jobs in certain enterprises. While most enterprises that received wage subsidies had subsidy contracts for only one person, there were 80 that had over ten. In one extreme case, one company had over 150 subsidy contracts. At these levels of subsidy, questions of fair competition arise. Another issue related to fair competition is the fact that fixed-term employment contracts are predominant among the contracts. From the point of view of the participants, fixed-term contracts don't tend to be a problem—analysis of the sustainability of the programme's effects indicated that employment rates remain high even after the subsidy period is over—rather, there may be problems from the point of view of fair competition.

In combination, the two above-mentioned aspects leave the impression that it is possible for a company to obtain a significant competitive advantage in e.g. seasonal work. One might argue that obtaining such an advantage is not justified. The interviews, too, indicated that employers sometimes have misunderstood the purpose of wage subsidies very well. For example, respondents found it as a shortcoming that it cannot be used conveniently enough for seasonal work. It was also suggested that the wage subsidy is too small for hiring high-wage employees.

Also questionable is the framework of indicators currently used for steering and monitoring the performance of the programme. This consists of only one indicator—the number of participants. The purpose of choosing indicators and setting their target levels is to give information relevant for management. The number of participants in the programme falls short in this regard, giving misleading information (e.g. if a thousand people enter the programme at the end of the year and the programme lasts until the first months of the next year, the participants are included in the first as well as second year's indicator, leaving the reader with the impression that two thousand people participated during the two years). Reporting the number of participants may have a function, but for management decisions, the input, output and impact indicators should be monitored. Regrettably, in the period under review, such a framework was lacking.

Based on the above, the following recommendations are made:

- A study should be carried out to estimate the magnitude of crowding out effects of the wage subsidy programme. Without considering these effects, the programme is very effective, but final conclusions regarding its effectiveness can be made only after these effects have been estimated.
- The aims of wage subsidies should be explained better to employers. At times, employers didn't seem to understand that wage subsidies are meant to return people in various risk groups to the labour market. This lack of understanding may be due to the change in the aims of the programme in 2010, which is all the more reason to re-clarify what the programme is for.

- In co-operation with other ministries, issues regarding wage subsidies and fair competition should be addressed. The government of Estonia has many important policy areas and it is important that they are compatible with each other. Granting a competitive advantage to a company through a wage subsidy may be justified, but it is important that it is a conscious decision that has been agreed upon. Setting limits to the maximum number of subsidised jobs per company should be considered—discussion of fair competition may not be relevant in case of two or three subsidised jobs but 150 contracts per company can be considered as a potentially significant distortion.
- Input, output and impact indicators should be specified for management of wage subsidies. The system of indicators currently reported in monitoring reports does not give sufficient information for planning the implementation of wage subsidies. A three-level mechanism of indicators including input indicators (e.g. number of entrants into programme/their share among registered unemployed), output indicators (regular exits from programme, number of those dropping out of the programme) and impact indicators (number of entrants in employment 6 months after exit from the programme) would give a significantly more informative picture of the implementation of the programme.
- The database of the Unemployment Insurance Fund should be improved regarding the information recorded on the wage during participation and post-participation employment of the programme participants. Currently, the database lacks adequate information on the wage earned by the subsidised worker, also the information on the term of the contract is ambiguous.
- Improve the procedure regarding documents required for subsidy payments: currently, the pay slip issued by the employer is required as proof of payment of the wage to the employee. It is recommended to use administrative data on income and social tax declarations instead.

Labour market training

The aim of labour market training is to insure better access to acquisition of professional skills by providing needs based training in connection with the needs of the labour market. Training is provided either through training courses procured by the Unemployment Insurance Fund or through using a so-called training voucher, which authorizes the unemployed person to choose from commercially available training programmes (provided that the training provider is in a list of training providers approved by the Unemployment Insurance Fund). The training voucher is a way to offer a flexible possibility to choose specific types of trainings needed by the person. A number of priority fields of training has been specified by the Unemployment Insurance Fund but the process of identifying these is not transparent. It is not clear what the relationship of the prioritisation is to actual training offerings for the unemployed and how the appropriateness of the priorities is being evaluated over time.

As indicators on labour market training, the number of participants and their employment rate 6 months after exit from the programme is used. Due to a number of largely technical reasons, in 2010 and January to May 2011 the number of participants was lower than the target level but the impact indicator—employment rate after 6 months—exceeded targets by more than 100%,

which could indicate a rather low level of the target. The level of the target could be due to the economic environment at the time.

On average, entry to training is preceded by six months of registered unemployment. The waiting period from agreeing on the provision of training to start of the training programme is generally short, usually up to one month. According to the documented principles on the provision of training, training is not offered before three months have passed from the beginning of unemployment.⁴ It is not clear, however, to what extent this rule is applied in practice, since the procedural rules do not include this principle. Also, this principle is not communicated to people. Likewise, the principle that training is provided on the basis of training needs is not always made clear to people, which may be one of the reasons why people do not sometimes understand why their application for training is rejected.

The different parties have different perceptions of the practice of identifying training needs. According to interviews with experts from the Unemployment Insurance Fund, the training needs are identified according to the prescribed procedures in a dialogue between the unemployed and the UIF. However, the unemployed and also training providers are of the opinion that participation of training is based primarily on the person's own initiative and decision. In about half of the cases, training has been preceded by career consulting, but it has not materially affected the person's wishes regarding training.

By socio-demographic characteristics, men's greater participation in training compared to women is apparent, but in general, this gender division also characterised unemployment in the period under review. From age groups, more training has been given to the group of 25-54 year olds, especially men in this age group.

Although there are no significant regional differences in the provision of training relative to registered unemployment, training provided through training vouchers is disproportionately concentrated in the capital region. By the level of education of the unemployed, the largest category among participants in training was secondary education. The share of people with the lowest level of education was lower than their share in overall unemployment. Among participants in voucher based programmes, the concentration of people with higher education is much higher compared to participants in training programmes procured by the UIF.

The distribution of the training participants by prior occupation is not significantly different from that among the unemployed in general. Also the members of risk groups are represented among training participants according to their overall proportion among the unemployed. The most common fields of training are IT and computer use and transport and maritime activities.

Other labour market services and benefits are received by less than a half of the participants. Participants in training also receive a stipend, but it is remarkable that recipients do not seem to

⁴ From the internal document of the Unemployment Insurance Fund, *Principles of offering the service of labour market training*: "Only in the course of job search will it become clear what the factors facilitating or hindering employment are. If the unemployed person has not found work **in three months** either herself or with our assistance, we shall analyse what the main obstacles are for her finding work and how to overcome those."

be aware that they have received it (probably because it is granted and transferred automatically upon participation in training).

According to training providers, participants in voucher based programmes are more motivated and drop out less often compared to participants in procured trainings. Participants in voucher based programmes have more often shown initiative in applying for training. On the other hand, the average cost of voucher based programmes is higher than procured programmes, both per programme and per hour of training.

Among participants' subjective evaluations of the impact of training on their labour market opportunities, both negative and positive assessments are represented equally. The negative assessment is slightly less common among those who participated in professional rather than general training. The analysis of linked UIF and Tax and Customs Board data on those who participated in training in the period January-May 2010 indicates that the probability of being employed 6 months after programme entry is 5.8 percentage points higher than the control group with similar characteristics. Since the difference is statistically significant, training can be considered **effective**. The effect of training on wages is, however, not statistically significant. The effect of training is also **sustainable**, remaining statistically significant after 12 and more months after the start of the programme.

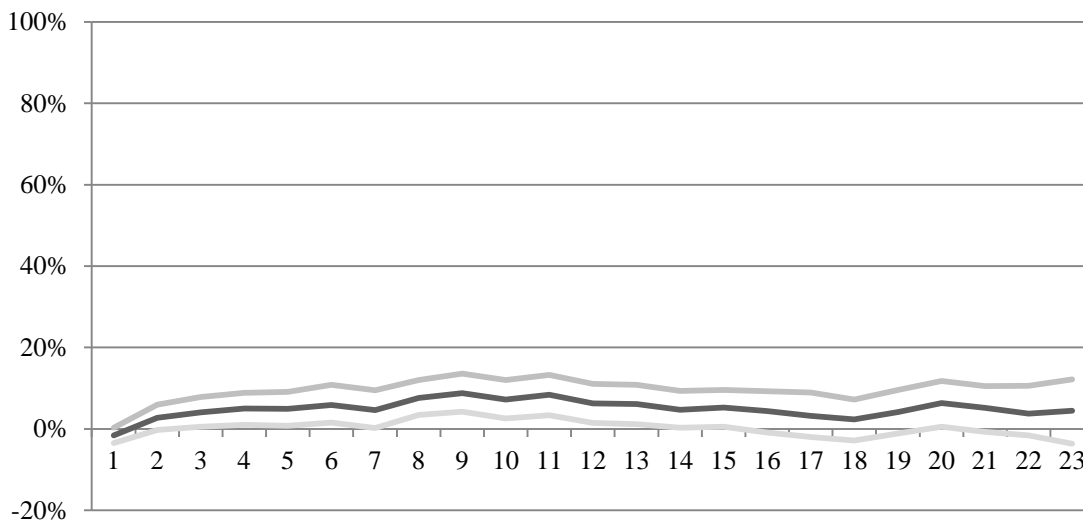


Figure 2. Differences in the probability of being employed for training participants and matched control group, 2 to 23 months after entry into the programme.

* *Light grey lines indicate 95% confidence intervals.*

The cost-benefit analysis of the labour market training measure indicates that the net present value of training is positive, hence labour market training is **efficient**. The benefit-cost ratio is 2.7, i.e. one euro invested in labour market training yields a return of EUR 2.7 to the society as a whole. Most of that return accrues to the training participant herself, but also from the point of view of costs and benefits accruing to the government sector, the net present value is positive.

As a result of the study, the following recommendations are made:

- Interviews with training providers indicated that using price as the primary criterion used in procurement of training has resulted in tenders being won by providers of questionable quality. The UIF, too, has reported quality problems in relation to training providers. It is recommended to employ additional evaluation criteria related to the content, methodology or effectiveness of the training programme.
- The expert opinion based process of identification of priority fields of training and its relationship with the actual practice of training provision is not transparent. This process should be better described and more systematic. First, it should be integrated with the forecast process; second, it should be regularly monitored whether the identified priorities have turned out to be appropriate or are in need of revision. Impact indicators should be reported by priority field of training. The classifications employed in databases should enable the comparison of priority fields of training with those actually provided.
- The information recorded in the UIF's databases on employment of participants is inadequate: only employment as a reason of termination of the status of registered unemployed. In addition to data from the UIF's information system, employment status subsequent to exit from registered unemployment should be monitored on the basis of Tax Board data and the relevant statistics should be included in regularly published reports. Data should be gathered regularly on the fields of subsequent employment, in order to compare those with the field of training.
- Training providers should systematically be given feedback on participants' labour market performance. This would give valuable input into ongoing revisions and improvements in training programmes. Possibilities of using participants' labour market performance indicators in comparing and evaluating training providers should be considered.
- The principles of provision of training express the position of the Unemployment Insurance Fund that training is not provided during the first three months of unemployment. This, however, is not reflected in procedural documents nor was it mentioned in interviews. If this principle is applied in practice, it should be clearly communicated. People have reported not understanding the reasons why requests for training were rejected. Applicants for training should be informed whether they were rejected because of the above-mentioned principle, the fact that need for training could not be identified, or some other reason.
- Even if it is not preferred to provide training in early stages of unemployment, the time from the beginning of unemployment until start of training should not be too long: it would be preferable to provide training at a time when the person still receives unemployment or other regular benefit, so that training would not be jeopardised by lack of any source of income.
- Better forecasts of labour demand would make it possible to use more procured training, which is less expensive, instead of training voucher based programmes.