



# Sustainability and transformation in European Social Policy

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### **Stream 10: The impact of EU social policy on social services and street-level bureaucracies**

Stream convenors: Renate Minas (Institute for Future Studies) and Yuri  
Kazepov (University of Urbino Carlo Bo)

**Universitat de València - ERI POLIBIENESTAR.**  
Edificio Institutos-Campus de Tarongers. Calle Serpis, 29. 46022. Valencia.  
Phone: (+34) 96.162.54.12- C.I.F. Q4618001-D  
Email: [espanet2011@uv.es](mailto:espanet2011@uv.es)

## **Are matches only made in heaven? How scientific evaluation can contribute to a better targeting of ESF-actions to disadvantaged groups**

Liesbeth Van Parys\* & Greet Van Dooren\*\*

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*Abstract - This paper deals with an evaluation study of the effects of EU financed projects targeted at disadvantaged groups in the labour market. More precisely, the study concerns six types of ALMP measures for unemployed subsidized in the framework Flemish European Social Fund-programme. Two uncommon though important research questions are addressed: 1) how do ALMP measures help increase participants' labour market chances and 2) which types of measures work best for whom. The results reveal that ALMP measures do not only directly affect one's labour market chances, but also indirectly through an enhancement of one's job related self-knowledge, knowledge of the labour market and job-search related self-efficacy. Not all types of ALMP are found to contribute equally though. Positive indirect effects are particularly reported for the following types of ALMP measures: diagnosis and pathway stipulation; vocational training; person-oriented formation and pathway accompaniment and follow-up. While moderation effects were tested for several disadvantaged subgroups, only those with health problems were found to benefit significantly more than others from job application and interview training. The sample consisted of 1717 participants who finished the ESF-action between December 2009 and February 2010 in Flanders. Data were collected both from administrative sources and via a telephone survey and analysed using ordinary least square regression and probit regression.*

### *Introduction*

In its EU2020 Strategy, the EU reaffirms its ambition to increase the labour market participation of its citizens. Just as the old employment guidelines, the new guidelines require the member states to provide active labour measures at an early stage. These measures include among others (on the job) training, job rotation, supported employment, direct job creation and start-up incentives. Whereas 'passive' measures such as income replacement and social protection should allow an individual to financially bridge a period after income loss, ALMP instruments are expected to stimulate and enable individuals to move into a new (or better) job. By means of the European Social Fund, the EU strives to give all citizens, especially those belonging to disadvantaged groups, access to these active measures and to tailor measures to target groups needs.

\*Liesbeth Van Parys is research associate at the Research Institute for Work and Society (HIVA-K.U.Leuven; Leuven, Belgium) in the Labour Market Research Group and is doing her PhD at the Centre for Sociological Research (CESO-K.U.Leuven). email: [liesbeth.vanparys@hiva.kuleuven.be](mailto:liesbeth.vanparys@hiva.kuleuven.be)

\*\*Greet Van Dooren is research associate at the Research Institute for Work and Society (HIVA-K.U.Leuven; Leuven, Belgium) in the Labour Market Research Group. Email: [greet.vandooren@hiva.kuleuven.be](mailto:greet.vandooren@hiva.kuleuven.be)


A stylized illustration of a sunset or sunrise over a body of water. The sky is a gradient of orange and yellow. A large white sun is partially obscured by dark red, silhouetted shapes representing clouds or hills. A small sailboat is visible on the right side of the water. The water is represented by a dark red band at the bottom of the illustration.

While the political belief in ALMP has been reaffirmed and is visible from a recent increase in ALMP expenditure by EU member states, the effectiveness of such measures remains subject of scrutiny and debate among scientists. In the EU and even more so in the US and Canada studies have been set up to evaluate ALMP programmes at the macro (e.g. linking total state expenditure on ALMP with levels of unemployment), meso (e.g. investigation of substitution, displacement and dead weight effects of particular programmes) and micro-level (e.g. linking individual labour market successes to participation in particular programmes). In this paper we will focus on the latter type of evaluation studies and more precisely on two ways to make micro-evaluations move the knowledge on ALMP forward: 1) moving beyond the classical (hard) parameters for success so as to understand *how* ALMP measures work; and 2) moving beyond the classical target group definition to understand better *what works for whom*.

### *On the importance of assessing soft intermediary outcomes of ALMP*


Micro-economic studies on the success of ALMP measures have been conducted in all OECD countries and on diverse types of ALMP. The lessons learned from these studies have been discussed and assessed in several literature reviews and meta-studies. Firstly, Kluve's (2006) meta-analysis of ALMP evaluations shows that what matters for the success of ALMP-programmes is in the first place the type of programme and not contextual factors or institutional characteristics of the labour market. Not all types of programmes are equally effective, though. According to the review of Heckman et al. (1999) there is considerable heterogeneity in the impact of active labour market programmes, but for some groups, programmes do yield significant positive effects. This is confirmed by the literature review of Martin & Grubb's (2001) who found that jobs-search assistance and wage subsidies in the private sector and labour market training do work, at least for some target groups. Card et al. (2010) provide a more recent meta-analysis of ALMP evaluations. Their sample comprised programme estimates from 97 studies of ALMP between 1995 and 2007. The results suggest that job search assistance programmes have overall a favourable impact, while subsidised public sector employment programmes are less effective than other types of ALMP. Classroom and on-the-job training are effective, be it in the medium rather than in the short run.

While these reviewed studies have generated new insights in *what* type of ALMP works (and – to a certain extent in – *what works for whom*) an important weakness of these studies is that they are biased towards so-called hard final outcomes such as time spent in (un)employment, labour

The background of the top section of the page is a stylized sunset. It features a bright orange and yellow sky with a large white sun partially obscured by dark red silhouettes of hills or mountains. A sailboat is visible on the right side of the horizon. The bottom of the background transitions into a light pinkish-red gradient.

market status x months after completion of an ALMP measure or increase of earnings after completion of an ALMP measure. Thus by focussing on the *final* outcomes of ALMP measures, the above mentioned studies overlook the questions how certain types of ALMP works and whether they do so for some and not for others (Martin & Grubb, 2001). This question of how ALMP improves one's labour market chances has been addressed in the literature on lifelong learning. Starting from human capital theory (Becker, 1964), it is assumed that participants' access to a job increases as their productivity has increased. From the point of view of signaling theory (Weiss, 1995), participants' attractiveness on the labour market increases as they are awarded evidence of formal qualifications. The human capital and signalling approach, though, are not the only ways in which one can look at how ALMP measures can improve one's chances in the labour market. This paper argues that there are many more ways in which ALMP measures can possibly improve one's chances to move into a job. Namely, if we were to look at *soft intermediary* outcomes next to these 'hard' outcomes, we would get more insight in *how* ALMP measures help unemployed people to gain a better position in the labour market. Unlike hard outcomes such as qualifications and jobs, soft outcomes cannot be measured directly or tangibly (Dewson et al., 2000). Soft outcomes cannot be objectively assessed and determined. Measurement often entails a subjective appreciation of the person him/herself, a peer or a counselor. Finally, soft outcomes are rather expressed in terms of degree than in absolute terms. Examples of these kind of outcomes are achieved improvements in one's personal skills (e.g. self-confidence, motivation, reliability,...), interpersonal skills (e.g. working in group, coping with authority), organisational skills (e.g. ability to prioritise) and analytical skills (e.g. time management and problem-solving) (ibid.).

The importance of moving beyond the classical parameters of success when evaluating ALMP, is further indicated by the shift in policy focus from 'employment' to 'employability', or else from 'job security' to 'employment security'. From this new perspective, ALMP measures should increase one's ability to make positive transitions in the labour market rather than increasing one's chances to move into that one job (see e.g. Gazier, 2010; European Commission, 2010). Employability is a multifaceted quality to gain and maintain employment (Hillage & Pollard, 1998) which depends on individual factors, personal circumstances (supporting and disabling factors at household level) and external factors (supporting and obstructing factors on demand-side and at institutional level) (McQuaid & Lindsay, 2005). The individual factors comprise both 'hard factors' (employment experience and formal qualifications) and a broad range of 'soft

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factors' such as basic skills, (inter)personal competencies, mental and physical well-being and health, adaptability, mobility, ... Hence to find out whether ALMP measures improve one's employability, their impact on such soft aspects needs to be taken into account too.

Thirdly, extending the evaluation of ALMP effectiveness to intermediary outcomes is important for those for whom employment is not in reach – at least not in the short term. As governments strive to activate as many citizens as possible, they are confronted with a group of ALMP participants who have to overcome high and/or multiple barriers to get employed. For these groups, it is often impossible to move into a job in the short run after participation in an ALMP measure. However, this does not mean that these people have not benefited in another way from their participation. Their participation might have been beneficial to acquire particular skills, attitudes, habits and network contacts which can help them to move into a job in the long run. Therefore, Dewson et al. (2000) make a plea to pay attention to and measure this 'distance travelled' by participants. Core soft outcomes which indicate 'progress' according to these authors are key work skills (team working, problem solving, communication skills), attitudinal skills (motivation, confidence, self-esteem, responsibility), personal skills (time keeping, personal hygiene, better health) and practical skills (writing a cv, manage money). Note that the word 'skills' is rather deceiving, as the outcomes include diverse 'abilities' and 'qualities' overlapping at least partly with the above mentioned concept of employability.

In conclusion, including soft intermediary outcomes in the evaluation of ALMP is relevant at programme level (i.e. insight in how ALMP work), project level (i.e. additional criteria for success) and individual level (i.e. recognition of progress). The kinds of soft outcomes that can be looked at in the framework of an evaluation study is broad, ranging from basic skills over personal and interpersonal competencies and analytical abilities to psychological traits such as confidence, self-esteem and self-knowledge. The impact of ALMP on these soft factors might be different depending on initial abilities of the affected target groups.

The fact that 'soft outcomes' cannot be directly observed and are to a certain extent subjective might explain why few labour economists have included them in studies so far. Nevertheless, attention for intermediary outcomes is not completely lacking in current literature.

*Examples of studies incorporating soft (intermediary) outcomes in ALMP evaluation studies*


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The European Social Fund has proven to be not only a trigger for innovation in ALMP measures but also for innovation in evaluations of ALMP measures. Especially in the UK, researchers have broadened the range of success parameters to include soft outcomes too. In the ESF-leavers' survey in England of 2002, Atkinson (2004) decided to include alternative outcome measures next to classical outcome measures such as 'labour market status x months after completion course' –so as to evaluate the impact of ESF-courses. A first employability outcome assessed whether or not the participants felt more confident about getting a job as a result of the course. This was indeed the case and this was especially so among groups with particular constraints such as lone parents, those without qualification at entry, those from a minority ethnic group and those with poor basic skills. The second employability outcome is whether one believes to be better skilled as a result of participation in the course. Here again, a high proportion of respondents agree that their skills have improved. The follow-up study conducted by Humphrey & Robinson (2005) indicates that both types of 'soft effects' are sustainable: those who were still unemployed in the follow-up study said they were still optimistic and agreed that the course had made them better skilled.

Another group of studies focus on 'social marginalization' as alternative outcome measure. Bredahl & Clement (2010) include three indicators of social marginalization i.e. social network, stigmatization and self-esteem in their evaluation of ALMP for recipients of social assistance in Denmark. While participation in ALMP was expected to have a positive effect on these three indicators, this could not be confirmed by the multiple class analysis on their survey data.

The study of Brussig et al. (2010) on a survey of welfare recipients in Germany shows that labour market interventions can foster different dimensions of employability. The authors distinguish the following five employability dimensions: qualifications and competences; health; preparedness to make concessions; individual resources; personal circumstances and circle of acquaintances. In a previous study Brussig & Knuth (2009) proved that – controlling for socio-demographic characteristics and regional contextual factors – individual employability does influence once chances to be employed. Hence, it can be expected that if ALMP increases one's employability, it thereby increases one's chances to be employed.

The psychologist Vinokur et al. (1995) in turn found an effect of participation in ALMP measures (namely the US JOBS II programme) on job search related self-efficacy, internal control orientation and self-esteem.

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Each of these studies is worthwhile for they identify relevant 'soft outcomes'. However, the studies consider these outcomes as *final* outcomes, and hence do not investigate the potential intermediary role of these outcomes. In other words, it remains an open question whether an improvement in one or more 'soft factors' increases one's chances to move into a job. A notable meta-analysis study (based on 73 empirical studies) has been conducted by Kanfer et al. (2001) who show that the success of ALMP on job search efforts on the one hand and employment chances on the other is affected by 'soft' antecedents such as personality (extroversion and conscientiousness) and self-evaluation (self-esteem and job-search related self-efficacy). Though, these studies cannot provide full insight in how ALMP measures increase one's chance to move into a job either. That is to say, they do include soft factors, but they only consider the effect of the original level of these factors on employment chances and thus not the effect of a change in this level thanks to participation in ALMP. In other words: we are interested in the question whether or not participants in ALMP benefit from an increase in soft factors that are crucial to their employment chances.

As far as we could retrace, only one study so far has been able to identify such soft intermediary effects, namely the study of Vuori & Vinokur (2005) on the Finnish Työhön job search intervention. Applying structural equation modelling, these authors identified that participation in this ALMP measure enhanced one's job search self-efficacy and inoculation against setbacks (jointly considered as job search preparedness) which in turn enhanced one's chance to be re-employed. Hence, in a recent study conducted by our research group in the framework of a mid-term evaluation of ALMP-measures subsidised by the Flemish ESF-programme 2007-2013, efforts have been made to start closing this gap in current ALMP evaluation literature by building on the study of Vuori and Vinokur (2005). In this paper we present and discuss the design, concepts, operationalisations and findings of our study concisely. For the full report we refer the reader to Van Dooren et al., 2011.

## *Hypotheses*


The study aimed to test four hypotheses about the role of ALMP measures in increasing participant's employability on the one hand and chances to move into work on the other. The ALMP measures provided in the framework of the Flemish ESF-programme can be subdivided into 6 types, each of them referring to a particular module of instruments applied by the Flemish PES VDAB:

- Module 2: diagnosis and pathway stipulation
- Module 3: job application and interview training
- Module 4: vocational training
- Module 5: person-oriented formation
- Module 6: training and support on the work floor
- Module 7: accompaniment and follow-up of pathway

The final goal of each of these types of measures is to move the participants into work. Depending on the module, this goal is formulated further or nearer in the future. Apart from this common final goal, the diversity among the modules is big as the measures in these modules have different content, duration, intensity, location, timing and aim. Hence, we can expect that the effect of these measures on the soft factors will be diverse too. Person-oriented formation for instance can be expected to have a rather indirect effect on moving into work whereas vocational training and especially training and support on the work floor will have a direct effect on one's chances to be employed. Building on the theoretical framework discussed above, we decided to not only include hard final outcomes but also soft intermediary outcomes to come to a complete evaluation of the ESF measures. Our aim is to understand 1) whether the ESF-actions foster one's chances to employment directly and indirectly via the soft factors; and 2) whether certain types of actions do this better for some target groups than for others?

As is clear from the discussion above, many relevant soft outcomes can be included in ALMP evaluation studies. For the purpose of the Flemish ESF evaluation, we opted for three soft factors which 1) have proven to be crucial in the above cited studies; 2) which can be affected by each type of measure and 3) which are relevant for participants with diverse distances from the labour market. The following three soft factors comply with our criteria. Firstly, we measure the effect of participation in the ESF-measures on 'knowledge about the labour market'. The second soft factor included in our study is 'job related self-knowledge'. These first two factors can together be considered as an approximation for pursuing 'a realistic job target'. Both factors have not been included yet as intermediary outcome measures in ALMP evaluation studies. They have been identified though as relevant factors in a study on career guidance by Sels & Verbruggen (2009).



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Thirdly, we measure the effect of participation on one's 'job search related self-efficacy'. This is the confidence a person has in him or herself to bring the search for a job to a good end. Our concept is a special application of the 'self-efficacy' concept of the psychologist Bandura (1986) which has been integrated later on in Ajzen's (1991) theory of planned behaviour. Hence, we expect one's chances to move into work to be higher when one's job search related self-efficacy i.e. the belief that you are able to complete the job search successfully has increased.

### *Hypothesis 1*

Hypothesis 1, 2 and 3 deal with the first research question of our study: how do ALMP measures increase one's chances to move into work? Firstly, we expect participation in the six types of ALMP measures to have a direct impact on the following three 'soft' factors. Though, given their diverse content and goals, we expect this impact to depend on the type of actions and the type of soft factor. More precisely we expect that:

- Job related self-knowledge is fostered through measures of the type of module 5
- Knowledge of the labour market is fostered through measures of the type of module 3, 6 and 7
- Job search related self-efficacy is fostered through measures of the type of module 3, 4, 5 and 6; and to a limited extent 2 and 7.

### *Hypothesis 2*

Participation in ALMP directly affects one's chances to move into work. We expect participants in module 4 and 6 measures to have higher chances to move into work. Participants in module 2 are expected to have the lowest chance.

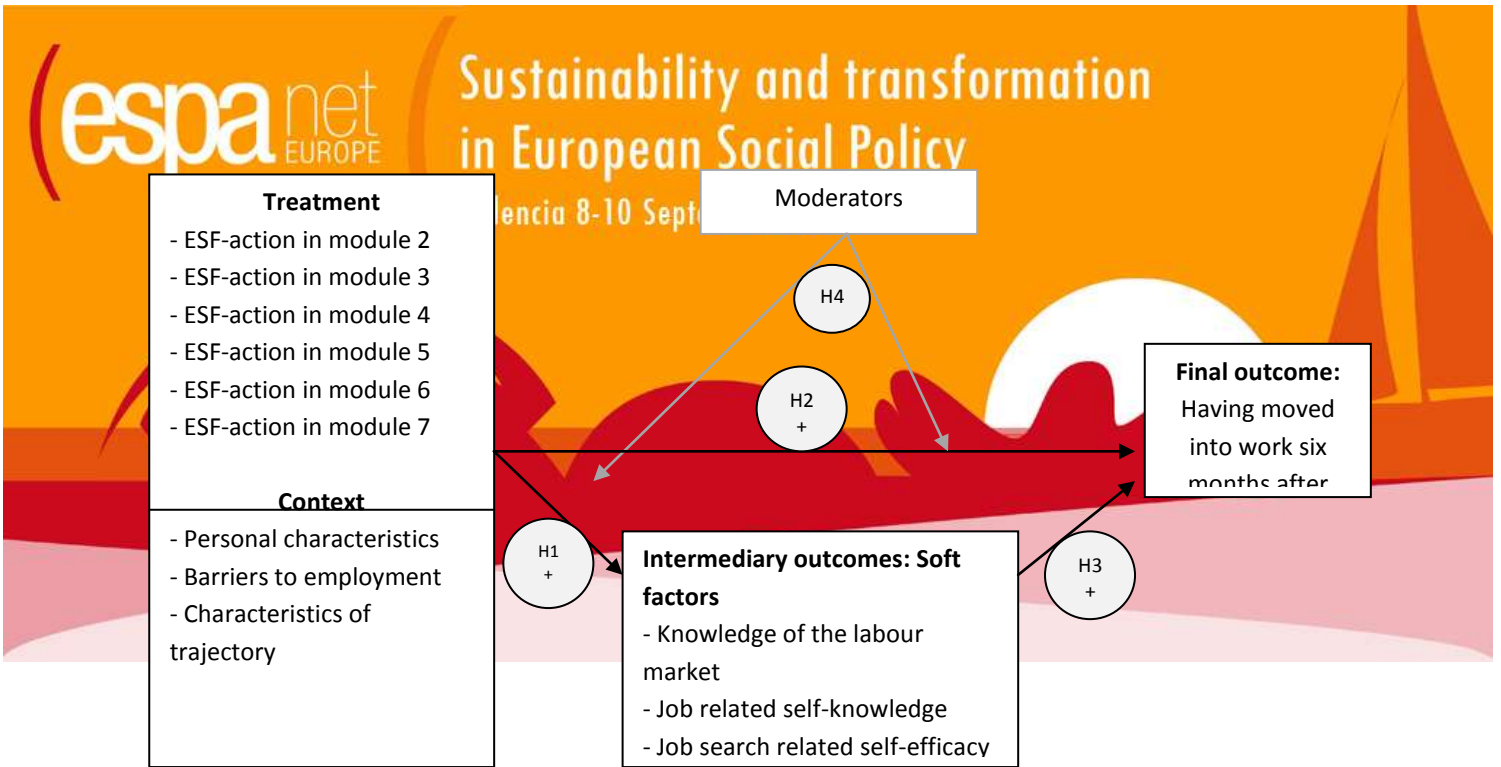
### *Hypothesis 3*

ALMP measures do not only have a direct effect on one's chances to move into employment. They also indirectly affect one's chances. That is to say, thanks to the fact that participation in ALMP promotes one's self-knowledge, knowledge of the labour market and job-search related self-efficacy, one's chances to move into work increase.

### *Hypothesis 4*

Hypothesis 4 deals with the second central research question of our study, namely: what works best for whom? Just as with hard outcomes, some target groups might benefit more from participation in certain ALMP measures than others. According to the ESF-evaluation study of Taylor & O'Connor (2005), evidence suggests that those who are furthest removed from the labour market experience a more limited effect of participation their chance to move into a job (hard outcome). Though, these participants too, experience positive soft outcomes. Hence the question rises whether they do perhaps benefit more than others from participation when it comes to these soft outcomes? This is in any case suggested by the findings of Atkinson et al. (2004; cf. above). Therefore, our study tests the hypothesis that those who are furthest removed from the labour market experience a bigger positive effect on the three soft outcomes than participants who have less barriers to work. In a first step we will look at typical target groups such as women, low educated, people from different origin and people with disabilities. In a second step, we move beyond these classical definitions of labour market disadvantages by looking at barriers such as a care task, mobility problems, difficult personal circumstances, low willingness to adapt, and poor health. Here again, attention will be paid to differences between types of ALMP measures.

Figure 1: Theoretical change model of ESF-measures



Source: Van Dooren et al., 2011

### *Data, research design and methodology*

#### *Data*

The study on which the here presented paper is based has been conducted in the framework of a range of evaluation studies on the Flemish operational ESF-programme 2007-2013 – Objective 2 – Priority 1 (talent activation and sustainable labour market integration) & Priority 2 (promote social inclusion of disadvantaged groups through a tailored approach). The subjects of evaluation in this particular study were the unemployed clients of the Flemish public employment service VDAB who participated in one of the six types of ALMP measures (cf. Hypotheses section above) which were subsidised by ESF. More precisely, the population consisted of 14370 unemployed persons who finished the ESF action between December 2009 and February 2010. An original sample of 6000 persons was drawn randomly from this population in a stratified way so that it contained 1000 persons per module. The size of this sample has been determined by the results of a power analysis (Faul et al., 2007) on the one hand and an anticipated response rate of one third on the other.

Data have been gathered in two ways. Firstly, administrative data collected by VDAB provided information on a range of demographic characteristics and the labour market status of each of the participants. Secondly, a telephone survey was conducted to collect information on how participants had experienced the ESF-action and to what extent they believe they had benefited from it. The survey also included a range of questions on their current situation. The survey has been conducted in June and July 2010. Hence for some the action had ended 4 months prior to the survey, while for others this time lag amounts to nine months. We will correct for this bias by including dummies for the time lag in the regression model. 4737 participants have been contacted of which 2005 people could be reached successfully i.e. a final sample of 334 persons

per module (and 335 for module 5). The main reasons for non-response were in order of importance: the person refused to participate, the person could not be reached, the person has insufficient knowledge of Dutch, the person could not remember having participated in an action. Due to missings on key variables the sample was finally reduced to 1717 participants. Descriptive analyses of the key variables shows that this final dataset does not differ from the one with 2005 participants (see Annex A).

The key dependent variables of the study have been operationalised in the following way. The three soft factors, job related self-knowledge, knowledge of the labour market and job search related self-efficacy have been measured using a Likert-type scale consisting of respectively 5, 7 and 7 items (5 point scale) which were adopted from scales used in previous studies (see literature review section). More precisely, participants are asked to make a subjective appraisal of their progress thanks to their participation in the ESF-action on the three soft factors. This subjective judgement is valuable as what is of key interest here is not so much what the objective progress is made by the participants, but how they experience the progress made. Alternatively, we could have assessed the progress made between a pretest and a posttest of the level of self-knowledge, knowledge of the labour market and job search related self-efficacy. However, as will be explained below, it was impossible to conduct such a pretest. As there was no possibility to do a pretest, the items are phrased such that the respondents are asked to appreciate themselves whether or not they have respectively more self-knowledge, labour market knowledge or have higher self-efficacy *thanks to* their participation in the action: "To what extent do you agree with the following statement: "Thanks to my participation in action x I am more confident that I can write a good application letter". Other examples of items are the following. For job related self-knowledge "Thanks to ... I am more aware of what is important to me in a job"; for knowledge of the labour market "Thanks to ... I know better what functions are suitable for me"; and for job search related self-efficacy "Thanks to...I am more confident that I will bring a job interview to a good end'. The internal consistency of the scales has been tested and approved (>0,70) with the Cronbach's alpha coefficient of reliability. Subsequently, a principal factor analysis has been conducted to verify whether the items are indeed manifest indicators of one underlying latent construct. Next 'refined factor scores' (DiStefano et al., 2009) were computed based on Thurstone's regression method. These standardised factor scores serve as proxies for the scores of the respondents on these latent variables.

The other key dependent variable in our study is 'moving into work'. More precisely the administrative data tell us whether a participant was employed six months after finishing off the action. The variable is dummy taking value 1 if the participant is employed or self-employed and value 0 if the participant is unemployed or inactive.

The key explanatory variable in our study is the module i.e. the type of action in which the unemployed persons participated. Originally this variable has been transformed into six dummies with each dummy indicating whether one participated or not in an action of the respective module. So if a person participated to an action of module 2, he would have score one for the dummy of module 2 and score zero for the dummies of modules 3 to 7. Though, as we will explain later on we chose to use the predicted values of the underlying latent variables of the probit estimations in our analyses rather than the dummies. So as to check whether particular disadvantaged groups in the labour market benefit significantly more or significantly less from participation in each of the modules, we include interaction terms in the regression models (cf. below). Classical indicators of 'disadvantages' are: age (continuous), gender (dummy), having a disability (dummy) and having a non-European origin (dummy), being low educated (dummy). Next to these, new indicators of 'disadvantage' have been included. These are based on a set of 17 Likert-items (five point scale) which measure to what extent participants are confronted with a diverse range of obstacles when searching a job. More precisely, participants are asked to what extent they agree or disagree with a set of statements such as 'During my search for a job I encounter problems due to the fact that I have to take care of family or friends.' This set of items has been reduced to five composite indicators (health problems, mobility problems, care task problems, personal circumstances problems and readiness to adapt problems) with principal component analysis.

Finally, reader's attention should be drawn to a range of control variables. The study focuses on one particular action each person has participated in. However, in reality these persons might have participated in several (successive) actions. While it is impossible to take into account each of these other actions, we do include a variable in the estimations which indicates whether the person is involved in a so-called 'limited pathway', an 'extended pathway' or in no pathway at all. Secondly, an extra dummy is needed to control for the fact that not all persons have completed the entire action in which they participated. Thirdly, we control for the length of the action. Finally, as already mentioned above, we need to control for the fact that some participants have

been interviewed four months after finishing off the action while for others the time lag amounted to nine months.

### *Research design*

The research design of the study can be described as a ‘posttest only quasi-experimental with nonequivalent groups’ design; or schematically:

X <sub>2</sub>	O <sub>2</sub>	
-----		
X <sub>3</sub>	O <sub>2</sub>	
-----		
X <sub>4</sub>	O <sub>2</sub>	with:
-----		
X <sub>5</sub>	O <sub>2</sub>	X <sub>i</sub> = treatment – the indexes refer to the numbers of the modules;
-----		
X <sub>6</sub>	O <sub>2</sub>	O <sub>i</sub> = posttest observation; and
-----		
X <sub>7</sub>	O <sub>2</sub>	--- indicating that the participants have not been randomly assigned
-----		
X <sub>7</sub>	O <sub>2</sub>	

Ideally, our study would have had a randomized or quasi-experimental pretest-posttest design. Though, several limitations made this impossible. Firstly, the design does not include a pretest as the evaluation study was only commissioned when participants had already started off or even finished the ESF-action. Secondly, the design lacks a control group as virtually all VDAB clients who could benefit from one of these actions are invited to participate. However, since module 2 entails just a screening and stipulation of an action plan, participants in module 2 can be regarded as the reference group. Finally, participants are not randomly assigned to actions in the modules. Instead, it is up to the counsellor of VDAB to decide – ideally in consultation with the client – who participates in what type of action. Next to these positive considerations (what works best for whom), selection into modules could also be biased due to creaming and parking practices of front line officials. Descriptive analyses indicate indeed that the composition of the groups differs, but it is impossible to verify whether this is due to positive or negative assignment practices. This is not problematic as long as the factors causing the heterogeneity are included in our regression model. However if there are characteristics which determine participants’ propensity to be selected in one module rather than in another which remain

unobserved, the estimators of the module parameters in our model might be biased and inconsistent (Verbeek, 2005, 132). This will be the case if these unobserved characteristics do not only correlate with the module variable (explanatory variables  $x_2$  in equation 1.1) but also with the error term ( $\varepsilon_i$ ) in 1.1.

$$y_i = x_i\beta_1 + x_2\beta_2 + \varepsilon_i \quad (1.1)$$

$$E\{\varepsilon_i x_1\} = 0; E\{\varepsilon_i x_2\} \neq 0 \quad (1.2)$$

Let us illustrate this with an example, namely the unobserved characteristic motivation for working. If persons with a high motivation tend to be more selected in e.g. module 4 (*endogenous explanatory variable*) and if a high motivation affects one's propensity to experience an effect on the soft factors and/or one's propensity to move into work (*response variable*), the effect of participation in module 4 on the soft factors and employment chances will be over or under estimated. To control for bias due to unobserved heterogeneity in our study, we estimated participants' propensity to be selected in each of the modules by use of probit regression.<sup>1</sup> The response variable is binary indicating whether the participant does or does not belong to the particular module. These probit models are derived using an underlying latent variable. Hence we get six (i.e. one for each module) structural equations of the form (1.3) with  $y^*$  as the propensity to be selected in one module rather than in the others. If this propensity is bigger than zero, the participant does belong to the respective module, else the participant does not belong to this module (1.4).

$$y^* = \beta_0 + \beta_1 x + \varepsilon \quad (1.3)$$

$$y = \begin{cases} 1 & \text{if } y^* > 0 \\ 0 & \text{if } y^* \leq 0 \end{cases} \quad (1.4)$$

The results of these estimations indicate that selection into the modules is determined by the respondents' age, duration of unemployment, education level, origin, disability, and the labour market region in which he or she lives. So as to eliminate potential bias due to unobserved characteristics, we include the predicted values of these latent variables in our further analyses

<sup>1</sup> Note that this method was chosen since the instrumental variable, the difference-in-difference and the two stages least squares methods to control for unobserved heterogeneity could not be applied given the data.

rather than the dummy variables for each module. The reader is referred to Annex B for the results of these estimations.

### *Estimation methods*

In order to test the hypotheses, we estimate the following models. To test the first hypothesis, we estimate the effect of participation in the six modules on each of the soft factors. Therefore we apply ordinary least squares regression. The modules (latent), the demographic and socio-economic characteristics and satisfaction with the content of the action are included as explanatory variables. Interaction effects of the modules with respectively origin, disability and age are tested (hypothesis 4). We save the predicted values of these soft factors to include in the further analyses.

To test the second hypothesis, we estimate a probit model with moving into work as the dependent variable. The modules (latent), the (predicted values of the) soft factors, the demographic and socio-economic characteristics and the job search obstacles are included as explanatory variables. Hence we estimate the *direct* effect of participation in the modules on moving into work. In order to estimate the *indirect* effect of participation in the modules on moving into work (i.e. the effect of the modules on moving into work via the soft factors) we repeat the probit estimation with the (predicted values of) the soft factors as additional explanatory variables (hypothesis 3). The indirect effect is calculated by multiplying the coefficients of the modules in the OLS-regression with the coefficients of the soft factors in the probit regression. Here again we finish by including interaction terms in the model estimations so as to test hypothesis 4. More precisely, we include interactions of the modules with the job search obstacles.

### **Empirical findings**

In this section we discuss the empirical findings regarding each of the hypotheses. For each hypothesis, we first discuss relevant results of descriptive analyses and then move on to the results of the inferential analyses.

*Hypothesis 1- ESF-actions positively affect participants' job related self-knowledge, knowledge of the labour market and job search related self-efficacy*



According to hypothesis 1, ESF-actions positively affect participants' job related self-knowledge, knowledge of the labour market and job search related self-efficacy. More precisely, we especially expect action in module 5 to foster self-knowledge; actions in module 3, 6 and 7 to foster knowledge of the labour market, and actions in modules 3, 4, 5 and 6 to foster self-efficacy.

A first step in assessing hypothesis 1 is to look at the non-refined<sup>2</sup> factor scores of each of the 'soft factors'. A score of 1 refers to 'I do not at all agree that I made progress'; 3 refers to 'I neither agree nor disagree', and 5 refers to 'I fully agree that I made progress'. This analysis reveals that on average, participants gave score 3.64 when assessing their progress on job related self-knowledge thanks to participation in the ESF-action. For labour market knowledge the average score amounted to 3.46 and for job search related self-efficacy to 3.62. Participants thus seem to slightly agree that they made progress on the three soft factors thanks to participation in an ESF-action. On average, participants of actions in module 3 tend to experience a bigger progress on all three soft factors compared to the overall group of participants. The same holds for participants of actions in module 5 except for the soft factor labour market knowledge.

Looking at the results of the ordinary least squares regression analysis, these findings are partly confirmed (see Table 1). What concerns job related self-knowledge the results suggest that – keeping all other variables constant – participants of module 2 type of actions (pathway diagnosis and stipulation) experience below average progress while participants of module 7 (pathway follow-up) experience above average progress thanks to their participation. Men and older participants experience below average progress. Those who show higher satisfaction with the content of the action in turn experience above average progress. Note that the coefficient of satisfaction suggests a high effect. However, OLS does not allow us to draw conclusion on the causal direction of this correlation. In sum, the findings on self-knowledge are not completely in

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<sup>2</sup> As mentioned in the data-section the scores of the participants on the Likert-items have been transformed into factor scores using the Thurstone regression method. This is desirable as refined factor scores (as opposed to non-refined or coarse factor scores) are not intercorrelated and tend to have less bias (Brown, 2006). However for this descriptive analysis the coarse factor scores (i.e. sum of the scores on the Likert-items divided by the number of items in the scale) are preferred since they are more intuitive.

line with our hypothesis: while we expected module 5 (person-oriented formation) to foster self-knowledge, above average progress is rather reported by participants of module 7.

When it comes to labour market knowledge, the results suggest that on average participants show no progress in labour market knowledge (see negative coefficient). Participants of module 2 once again report below average progress, while participants of module 5 (person-oriented formation) experience above average progress. Here again, participants who are more satisfied with the action report higher progress on the soft factor. In sum, our hypothesis is not confirmed for this soft factor. None of the modules is found to contribute to progress in labour market knowledge, while we expected modules 3, 6 and 7 to do so.

Participation in ESF-actions seems to have more impact on job search related self-efficacy. Participants of module 3, 5 and 7 experience above average progress on this soft factor. Participants of module 2 and 4, however, experience below average progress. Older persons are found to report lower progress on the self-efficacy factor. Finally, satisfied participants report higher progress. In sum, our hypothesis is partly confirmed. We indeed expected modules 3 and 5 to foster self-efficacy. However, while we also expected modules 4 and 6 to contribute, this could not be confirmed by the data.

One plausible explanation for the fact that our hypotheses could only partly be affirmed might be that the variable 'satisfaction with the content of the action' explains away part of the soft factors' effect. If this variable is removed from the analysis, we do find the hypothesized positive effect of actions in module 5 on self-knowledge. Another explanation could be that the actions do not deliver the results they intended to.

Table 1 Results of the OLS-estimation of the soft factors

N=1717	Job related self-knowledge			labour market knowledge			job search related self-efficacy		
	$\beta$	<i>S.E.</i>	<i>Pr &gt;  t </i>	$\beta$	<i>S.E.</i>	<i>Pr &gt;  t </i>	$\beta$	<i>S.E.</i>	<i>Pr &gt;  t </i>
<b>Intercept</b>	0.24855	0.42713	0.5607	-0.24917	0.35543	0.4834	0.24179	0.43749	0.5806
<b>module 2</b> - diagnosis and pathway stipulation	-0.13593	0.0726	0.0613	-0.21174	0.06622	0.0014	-0.12685	0.07382	0.0859
<b>module 3</b> - job application and interview training	0.01823	0.09748	0.8516	-0.01198	0.08109	0.8826	0.16579	0.09811	0.0912
<b>module 4</b> - vocational training	-0.09535	0.07239	0.188	-0.0138	0.06517	0.8323	-0.17506	0.07296	0.0165
<b>module 5</b> - person-oriented formation	0.13724	0.0839	0.1021	0.1813	0.08248	0.0281	0.20692	0.08343	0.0132
<b>module 6</b> - training and support on the work floor	-0.01349	0.05454	0.8047	0.04116	0.05431	0.4486	0.02471	0.0565	0.6619
<b>module 7</b> - accompaniment and follow-up of pathway	0.14959	0.06336	0.0183	0.08493	0.05323	0.1108	0.17358	0.06468	0.0074
<b>duration of action in days</b>	0.000249	0.000155	0.108	0.000198	0.00016	0.2147	0.000111	0.000161	0.4923
<b>full completion of action</b> (compared to no full completion)	0.03076	0.04762	0.5184	0.06844	0.04895	0.1622	0.08629	0.0495	0.0815
<b>survey 4 months after end action</b> (compared to 9 months)	-0.29719	0.11732	0.0114	-0.2247	0.1207	0.0628	-0.21552	0.12193	0.0773
<b>survey 5 months after end action</b> (compared to 9 months)	-0.2188	0.11685	0.0613	-0.20633	0.1202	0.0862	-0.14495	0.12145	0.2328
<b>survey 6 months after end action</b> (compared to 9 months)	-0.33508	0.11622	0.004	-0.25479	0.11958	0.0333	-0.29334	0.1208	0.0153
<b>survey 7 months after end action</b> (compared to 9 months)	0.03226	0.15022	0.83	0.0395	0.15458	0.7983	0.1455	0.15613	0.3515
<b>survey 8 months after end action</b> (compared to 9 months)	-0.1048	0.15296	0.4934	-0.11777	0.15719	0.4538	-0.02453	0.15884	0.8773
<b>male</b> (compared to female)	-0.12174	0.0459	0.0081						
<b>age</b>	-0.01034	0.00443	0.0196				-0.00834	0.00454	0.0665
<b>high satisfaction with content of action</b> (compared to low)	0.63884	0.04504	<.0001	0.66177	0.0463	<.0001	0.68061	0.04676	<.0001

*Hypothesis 2 – ESF-actions directly and positively affect participants’ chances to move into work*

The second hypothesis to be tested is whether the ESF-actions directly and positively affect one’s chances to have moved into work six months after finishing off the action. More precisely we especially expect actions in module 4 and module 6 to increase one’s job chances ‘directly’.

The results of the descriptive analyses (i.e. frequency tables of ‘moving out of work’ by module) reveal that the employment outcomes differ indeed among the modules. In line with our hypothesis, the share of participants who had moved into work six months after finishing off the action is indeed highest for module 4 & 6, respectively 32.75% and 39.85%. The lowest employment rates are reported for modules 2 & 5, respectively 17.85% and 17.86%.

According to the results of the binary probit estimation, keeping all other variables constant, actions of two types of modules foster one’s chances to move into work, namely module 3 and 6. Participants in actions of module 4 on the contrary report a lower chance to move into work. Clearly, this is not fully in line with our hypothesis.

Other notable findings are the following. Persons who report a bigger progress on job related self-knowledge have an above average likelihood to move into work, while persons who report a bigger job search related self-efficacy have a lower than average likelihood to move into work. An explanation for this finding could be that persons who feel more capable of bringing the job search to a good end (higher self-efficacy) tend to allow themselves more time to find a better job and/or set higher aims (in terms of wage, job content) for their job search. Persons who know better what they want (more self-knowledge), in turn, search more goal-oriented.

Finally, male participants, older participants and participants of non-EEA-origin report a higher likelihood to have moved into work, while those who are more than 1 year unemployed and those with more health-related obstacles have a below average likelihood to have moved into work.

Table 2 Results of the binary probit estimation of having moved into work six months after finishing off participation in the ESF-action

N=1717	$\beta$	<i>S.E.</i>	<i>Pr &gt; ChiSq</i>
<b>Intercept</b>	-0.5229	1.0788	0.6279
<b>module 2</b> - diagnosis and pathway stipulation	0.3005	0.1882	0.1103
<b>module 3</b> - job application and interview training	1.7129	0.2979	<.0001
<b>module 4</b> - vocational training	-0.434	0.2404	0.0711
<b>module 5</b> - person-oriented formation	0.2967	0.248	0.2316
<b>module 6</b> - training and support on the work floor	0.6737	0.1383	<.0001
<b>module 7</b> - accompaniment and follow-up of pathway	-0.0341	0.1624	0.8336
<b>duration of action in days</b>	-0.00157	0.000385	<.0001
<b>full completion of action</b> (compared to no full completion)	0.4644	0.1199	0.0001
<b>job related self-knowledge</b>	14.6968	1.9733	<.0001

N=1717	$\beta$	S.E.	Pr > ChiSq
<b>labour market knowledge</b>	-1.2789	1.006	0.2037
<b>job search related self-efficacy</b>	-12.4047	1.5054	<.0001
<b>male</b> (compared to female)	1.7838	0.2552	<.0001
<b>age</b>	0.0493	0.0143	0.0005
<b>non-EEA-origin<sup>3</sup></b> (compared to EEA-origin)	0.3424	0.1792	0.056
<b>1-2 years unemployed</b> (compared to <1 year)	-0.1954	0.1632	0.2313
<b>&gt;2 years unemployed</b> (compared to <1 year)	-0.4479	0.1759	0.0109
<b>health as obstacle in job search</b>	-0.2111	0.0405	<.0001

*Hypothesis 3 – ESF-actions positively affect participants’ chances to move into work via their positive impact on the soft factors*

Whereas hypothesis 2 concerns the direct effect of the six modules on moving into work (blue arrows in Figure 2), hypothesis 3 is concerned with their indirect effect (the orange and green arrows in Figure 2). Namely, the effect that participation in an ESF-action from a particular module has on moving into work via the soft factors. These indirect effects can not be read straight from the regression results, but need to be calculated (see estimation methods section). We report the calculated indirect effects in Table 3 below.

Let us first look at the total effect (i.e. sum of direct and indirect effects) of each module. We conclude that actions in module 2, 4 and 6 have a positive effect on participants’ likelihood to move into work, whereas actions in module 3, 5 and 7 score below average. This positive effect of module 4, vocational training, and 6, training and support on the work floor, is logic as these are the modules most directly linked to work. The result for module 2 is more puzzling.

<sup>3</sup> VDAB’s definition of ‘origin’ makes a distinction between those with EEA and non-EEA origin. EEA is the acronym for the European Economic Area including the EU member states, Norway, Iceland and Lichtenstein.

Figure 2: The empirical change model (without interactions)

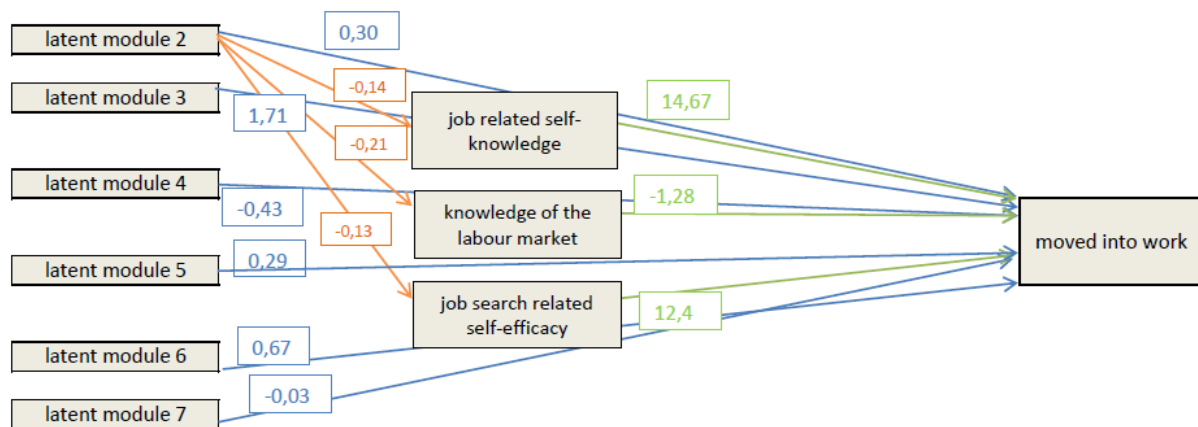



Table 3 The direct and indirect effect of each module on moving into work

	Direct effect	Indirect effect via job related self-knowledge	Indirect effect via knowledge labour market	Indirect effect via job search related self-efficacy	Total effect
<b>Module2</b> - diagnosis and pathway stipulation	0.3005	-1.9977	0.2708	1.5735	0.1471
<b>Module3</b> - job application and interview training	1.7129	0.2679	0.0153	-2.0566	-0.0604
<b>Module4</b> - vocational training	-0.4340	-1.4013	0.0176	2.1716	0.3539
<b>Module5</b> - person-oriented formation	0.2967	2.0170	-0.2319	-2.5668	-0.4850
<b>Module6</b> - training and support on the work floor	0.6737	-0.1983	-0.0526	-0.3065	0.1163
<b>Module7</b> - accompaniment and follow-up of pathway	-0.0341	2.1985	-0.1086	-2.1532	-0.0974

The background of the top section is a stylized sunset or sunrise scene. It features a large white sun partially obscured by dark red silhouettes of hills or mountains. The sky is a gradient of orange and yellow, and the water in the foreground is a lighter shade of orange. A sailboat is visible on the right side of the horizon.

The indirect effects of the actions in the modules are less clear cut. We note that module 5 and module 7 actions have the biggest positive indirect effect through job related self-knowledge. Module 2 actions have a big negative indirect effect via this soft factor. The effect on work via knowledge of the labour market is on the contrary biggest for module 2. Other modules have rather small or negative indirect effects through this soft factor. Finally, module 2 and 4 have a big positive effect on work via job search related self-efficacy.

It should be noted however that the 'direct' effects reported here might be overestimated. It could well be that there are other indirect effects which are omitted from our model. Such intermediary outcomes are, for instance, on self-esteem or problem-solving skills (cf. literature review section).


#### *Hypothesis 4 – Some disadvantaged groups benefit more from certain types of ESF-actions than others*

Hypothesis 4 deals with the question what works best for whom. To find an answer to this question interaction terms were included in our estimation models (see estimation methods section). Firstly, we investigated whether the effect of participation in the six modules on the soft factors differs for particular disadvantaged groups. More precisely, we included interaction terms of the modules with respectively age, origin and disability in these three OLS-regressions. However, none of these prove statistically significant.

Secondly, we included interaction terms in the probit estimations of likelihood to move into work, namely of the modules with age, origin, and health as an obstacle in the job search. One interaction term was proven to be statistically significantly bigger than zero, namely the one of health with module 3. As in the model module 3 was compared to module 7, we conclude that participants for whom a bad health is an obstacle to search a job will be better off if they participate in an action in module 3 than in an action in module 7.

## **Conclusion and discussion**

This paper dealt with the evaluation of six types of ALMP measures subsidized in the framework of the Flemish European Social Fund. Two research questions that are rather seldom in this type

The background of the top section is a stylized sunset or sunrise scene. It features a large white sun partially obscured by dark red silhouettes of hills or mountains. The sky is a gradient of orange and yellow, and the water in the foreground is a light pinkish-red. A sailboat is visible on the right side of the horizon.


of research were put central: 1) do ALMP measures foster participants' chances to move into work only directly or also indirectly through their effect on job related self-knowledge, knowledge of the labour market and job search related self-efficacy; and 2) what type of measures work better for whom. Firstly, we investigated whether participation in each of the types of ESF-actions has a positive effect on these soft factors. The results suggest that participants of certain ALMP measures indeed report a positive effect on these factors. More precisely, ESF-actions in module 3 (job application and interview training) and in module 5 (person-oriented formation) foster one's self-efficacy; actions in module 6 (training and support on the work floor) foster one's knowledge of the labour market and actions in module 7 (accompaniment and follow-up of pathway) foster both self-knowledge and self-efficacy. Participants of module 2 (diagnosis and stipulation of pathways), conversely, report for all three soft factors lower than average effects; and participants of module 4 (vocational training) report below average effects on self-efficacy.

Secondly, the direct and indirect effects of participation in the ESF-actions on moving into work were investigated. What concerns the direct effects, we conclude that actions in module 2 (pathway diagnosis and stipulation), 4 (vocational training) and 6 (training and support on the work floor) have a positive effect on participants' likelihood to move into work, whereas actions in module 3 (job application and interview training), 5 (person-oriented formation) and 7 (accompaniment and follow-up of pathway) score below average. What concerns the indirect effects, several types of actions are found to foster job outcomes via the soft factors: participation in actions of module 5 (person-oriented formation) and 7 (accompaniment and follow-up of pathway) increases one's chances to move into work thanks to an increase in self-knowledge; participation in module 4 (vocational training) increases one's job chances through increased self-efficacy; and module 2 (pathway diagnosis and stipulation) through both labour market knowledge and self-efficacy.

What concerns the question what type of ESF-actions work best for whom only one moderator could be found, namely health as a job search obstacle. More precisely, participants for whom a bad health is an obstacle in the job search process will be better off if they participate in an action in module 3 than in an action in module 7.

Further research is desirable, however, so as to be able to draw firm conclusions on how ALMP measures improve one's labour market chances and on what works best for whom. A first issue




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to be addressed in future research is the operationalisation of the final employment outcome. In this study, labour market success was defined as “having moved into work six months after finishing the ESF-action”. This is a limited indicator of labour market success as it is a snapshot of one’s labour market situation at a particular moment in time. Therefore we run the risk to over and under estimate the true labour market success of the participants. Employed participants might lose their job the next day while unemployed participants might find a job the next day. Moreover, six months is a rather short period of time. Participants probably only develop a stable labour market situation about nine months after finishing the ESF-action. Therefore, the study will be replicated later on with more recent data which allow to use the number of months spent in employment up to nine months or even a year after finishing the action as a final outcome indicator.

Secondly, as only three soft factors were included in the study, the direct effect of participation in the six types of ALMP measures might be overestimated. As the literature review indicates, other relevant soft intermediary outcomes could be thought off – e.g. increased self-esteem, more problem-solving capacity, and more preparedness to adopt. Ideally, evaluation studies are set up in time so that these outcomes can be measured based on a pre- and posttest.

Thirdly, the problem of unobserved heterogeneity deserves attention. Since the assignment of unemployed persons to types of actions does not happen at random, differences in outcomes of participants in the six types of actions might be falsely contributed to the quality of the better performing types. An alternative explanation could be though that those persons who are more capable of finding a job are overrepresented in these types of actions. This rival explanation can be rejected if we control for these ability differences of participants. However, many ability sources remain unobserved. Therefore, we conducted our analysis in two steps. First we made a probit estimation of one’s chance to be selected into one module rather than in another. In the main analyses we then used the predicted values of these latent variables. The comparison of the results of these estimates with the estimates obtained without controlling for unobserved heterogeneity indicates that this control is indeed relevant.

In sum, our results confirm that it is desirable to move beyond the classical outcome measures which focus on final labour market results. By including soft intermediary factors we learn that certain types of ALMP measures do improve participants’ self-knowledge, knowledge of the labour market and job search related self-efficacy. Moreover, thanks to the improvement on

A stylized illustration of a sunset or sunrise over a body of water. The sky is a gradient of orange and yellow. A large white sun is partially obscured by dark red silhouettes of hills or mountains. A sailboat is visible on the right side of the water. The water is represented by a dark red band at the bottom of the illustration.

these fronts, participants are found to be better equipped to move into work. Hence, when ignoring these intermediary soft outcomes, researchers actually overestimate the direct effects of participation in ALMP and they miss the opportunity to get an understanding of how ALMP measures affect participants' chances to move into work. Future research could focus on the identification of other potentially relevant soft intermediary outcomes, on to the development of scales to measure these soft intermediary outcomes and on the challenge to control for unobserved heterogeneity.

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## Annexes

### Annex A Comparison of the original sample (N=2005) and the analysed sample (N=1717)

	Original sample		Analysed sample	
	<i>freq</i>	<i>%</i>	<i>freq</i>	<i>%</i>
module 2	334	16.7	297	17.3
module 3	334	16.7	292	17
module 4	334	16.7	287	16.7
module 5	335	16.7	280	16.3
module 6	334	16.7	271	15.8
module 7	334	16.7	290	16.9
Moved into work	522	26	446	26
Did not move into work	1482	74	1271	74

	Original sample			Analysed sample		
	<i>mean</i>	<i>median</i>	<i>s.d.</i>	<i>mean</i>	<i>median</i>	<i>s.d.</i>
Job related self-knowledge	0	0.15131	0.9361	0.00316	0.15131	0.921
Knowledge of the labour market	0	0.149135	0.94965	-0.00096	0.13657	0.93722
Job search related self-efficacy	0	0.157033	0.95492	-0.00766	0.13809	0.94746

**Annex B** Estimates of the probit regression ‘participation in the respective modules’

N=2005	Module 2			Module 3			Module 4			Module 5			Module 6			Module 7		
	$\beta$	S.E.	Pr > Chi <sup>2</sup>	$\beta$	S.E.	Pr > Chi <sup>2</sup>	$\beta$	S.E.	Pr > Chi <sup>2</sup>	$\beta$	S.E.	Pr > Chi <sup>2</sup>	$\beta$	S.E.	Pr > Chi <sup>2</sup>	$\beta$	S.E.	Pr > Chi <sup>2</sup>
intercept	-1.693	0.1796	<.0001	-2.301	0.1954	<.0001	-1.464	0.1581	<.0001	-0.819	0.1343	<.0001	1.2625	0.2078	<.0001	-1.416	0.1922	<.0001
1 to 2 years unemployed	0.2175	0.1045	0.0375	0.3338	0.1053	0.0015	-0.1414	0.1081	0.1969	-0.438	0.1226	0.0004	-0.026	0.1355	0.85			
> 2 years unemployed	0.5351	0.0951	<.0001	-0.135	0.1113	0.2249	-0.234	0.1076	0.0299	-0.368	0.1136	0.0012	0.4653	0.1212	0.0001			
men							0.1938	0.0693	0.0051	-0.184	0.0702	0.0086				0.0289	0.0729	0.6913
age	0.0191	0.0033	<.0001	0.0338	0.0034	<.0001							-0.066	0.0043	<.0001	0.0091	0.0032	0.0042
medium-educated	0.4196	0.0781	<.0001	0.2396	0.0823	0.0036	0.3529	0.0759	<.0001				-0.833	0.1043	<.0001	-0.392	0.0826	<.0001
high-educated	0.2177	0.1098	0.0474	0.5238	0.1073	<.0001	0.3948	0.1056	0.0002				-1.216	0.2299	<.0001	-0.813	0.1464	<.0001
Non-EEA-origin	-0.179	0.0962	0.0625	-0.337	0.1095	0.0021	-0.226	0.0941	0.0165	0.629	0.0818	<.0001	-0.408	0.1123	0.0003	0.4479	0.0921	<.0001
Having a disability	-0.21	0.1017	0.0386	-0.506	0.1155	<.0001				-0.242	0.1029	0.0187				0.7879	0.0842	<.0001
Labour market	-0.606	0.5781	0.2944	-0.002	0.5091	0.9974	-3.645	78.15	0.9628	0.9433	0.419	0.0244	0.1432	0.619	0.8171	-4.399	11.87	0.9704

N=2 005	Module 2			Module 3			Module 4			Module 5			Module 6			Module 7		
	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>
ket regio n 1																		
Labo ur mar ket regio n 2	- 0. 18 9	0. 15 26	0. 21 64	- 0. 28 1	0. 16 84	0. 09 49	0. 33 75	0. 16 92	0. 04 6	- 0. 17	0. 15 61	0. 27 6	0. 42 78	0. 20 01	0. 03 25	- 0. 03 6	0. 17 09	0. 83 37
Labo ur mar ket regio n 3	- 0. 25 8	0. 15 78	0. 10 19	- 0. 29 2	0. 17 46	0. 09 43	0. 26 35	0. 17 2	0. 12 55	- 0. 17 3	0. 15 75	0. 27 16	0. 16 08	0. 20 14	0. 42 47	0. 37 47	0. 16 64	0. 02 43
Labo ur mar ket regio n 4	0. 02 05	0. 15 29	0. 89 31	- 0. 17 6	0. 17 07	0. 30 32	0. 19 02	0. 17 54	0. 27 82	0. 14 15	0. 15 66	0. 36 63	- 0. 11 6	0. 21 48	0. 58 87	- 0. 04 1	0. 17 65	0. 81 85
Labo ur mar ket regio n 5	- 0. 28 9	0. 19 92	0. 14 73	0. 00 54	0. 20 61	0. 97 93	0. 26 7	0. 20 82	0. 19 97	- 0. 04 6	0. 20 12	0. 81 81	- 0. 51 5	0. 29 09	0. 07 68	0. 49 4	0. 19 96	0. 01 33
Labo ur mar ket regio n 6	- 0. 38 3	0. 19 63	0. 05 1	0. 36 39	0. 18 86	0. 05 36	0. 44 83	0. 19 67	0. 02 27	- 0. 32 5	0. 20 84	0. 11 86	- 0. 16 8	0. 24 31	0. 48 89	- 0. 03	0. 20 37	0. 88 42
Labo ur mar ket regio n 7	- 0. 53 4	0. 19 28	0. 00 56	- 0. 04 3	0. 18 94	0. 82 07	0. 42 27	0. 19 06	0. 02 66	0. 11 01	0. 18 04	0. 54 16	0. 44 14	0. 22 76	0. 05 25	- 0. 37 1	0. 21 85	0. 08 97
Labo ur mar ket	- 0. 88 8	0. 27 76	0. 00 14	0. 59 47	0. 21 26	0. 00 51	0. 43 01	0. 22 4	0. 05 48	- 0. 29 9	0. 23 77	0. 20 86	- 0. 19 9	0. 28 14	0. 48	0. 03 72	0. 23 41	0. 87 37

N=2 005	Module 2			Module 3			Module 4			Module 5			Module 6			Module 7		
	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>	$\beta$	S. E.	Pr > Chi <sup>2</sup>
region 8																		
Labour market region 9	-0.144	0.2005	0.4728	-0.237	0.2279	0.2982	0.5404	0.2026	0.0076	-0.048	0.2011	0.8117	-0.398	0.2574	0.1219	0.2138	0.2059	0.2992
Labour market region 10	-0.042	0.173	0.808	-0.22	0.1998	0.2706	0.3316	0.1898	0.0806	-0.095	0.1757	0.5871	0.2651	0.2154	0.2184	-0.169	0.194	0.3845
Labour market region 11	0.0175	0.1865	0.9251	-0.242	0.2088	0.2464	0.1342	0.2139	0.5303	-0.162	0.2033	0.4245	0.4535	0.2491	0.0686	-0.08	0.2252	0.7212
Labour market region 12	-0.654	0.1899	0.0006	0.5819	0.1706	0.0006	0.2791	0.1847	0.1307	-0.145	0.1754	0.4101	-0.008	0.2243	0.9717	-0.315	0.1996	0.1152
Labour market region 13	-0.107	0.2195	0.6259	0.156	0.2253	0.4887	0.4412	0.2246	0.0495	-0.0716	0.2976	0.0161	0.0717	0.2785	0.7969	0.0828	0.2345	0.724