5.4 MIGHT TRAINING PROGRAMMES EASE LABOUR SHORTAGE? THE TARGETING AND EFFECTIVENESS OF TRAINING PROGRAMMES ORGANISED OR FINANCED BY LOCAL EMPLOYMENT OFFICES OF THE HUNGARIAN PUBLIC EMPLOYMENT SERVICE

ANNA ADAMECZ-VÖLGYI, MÁRTON CSILLAG, TAMÁS MOLNÁR & ÁGOTA SCHARLE

One of the prime roles of public employment services is to make the matching between the demand and supply for labour more efficient. In Hungary, this function is increasingly relevant, as demand grew primarily for a skilled workforce over recent years, while the majority of the unemployed are either uneducated or their professions are obsolete. Providing training for the unemployed could in principle contribute to the alleviation of the shortage of labour, if the number of training offers provided by employment centres are adequate, the training programmes are of good quality and are targeted at those in need.

In this short study, we examine two questions. Firstly: how did the number and composition of those who took part in training programmes change? Secondly: how did the effectiveness of these programmes evolve between 2010 and 2013?

Development of the number and the composition of participants of the retraining programs

While the amount spent on training job seekers (10–20 billion HUF) was nearing that of the expenditure for public employment (20–30 billion HUF) in the few years before 2008, during the crisis the latter significantly increased, whereas spending on training began to decrease. However, the truly remarkable change in direction occurred in 2012, when training expenditures dropped from 7 billion HUF in 2011 to 878 million HUF in 2012, according to data from Eurostat. In the following two years, the expenditures on training remained at the same low level, and only increased substantially in 2015.

While in the period between 2004 and 2007, 25-27 thousand participants entered the training programmes, during the financial crisis (between 2008 and 2010), 38-42 thousand people took part. Subsequently, the number of entrants to the training programmes decreased continuously (with a significant annual fluctuation).¹ If we examine the same figures in terms of the percentage of quasi-unemployed (those who are registered unemployed, those in public works and those who participated in active measures) who took part in the training programs, no clear tendency can be observed (*Figure 5.4.1*). Although this rate was still above 5% in the early 2000's, since 2004, the proportion of

1 It is important to emphasize that we do not analyze the short training programmes organized for public works participants. those participating in the training has been stagnating with significant annual fluctuation. Thus, the proportion of those participating in the training fluctuated between 1% and 4% of the unemployed, with an average of around 2,7%.



Note: Annual numbers in October, the total number of registered unemployed and program participants is 100%. Source: National Employment Service (NES).

The composition of training participants in terms of their educational attainment changed somewhat over recent years. The proportion of those in training who have completed either primary school at most or vocational school relative to their proportion among all registered unemployed fluctuated around 80% between 2010 and 2016. It is worth noting that these two groups account for more than 70% of the quasi-unemployed (including those in public works). By contrast, the unemployed who graduated from secondary school are significantly more likely to participate in retraining programs. At the same time, since 2009, the over-representation of job seekers with college or university qualifications in training has substantially declined, and over the last three years, the over-representation of those with secondary qualifications has also decreased. As a result, while during the period between 2003 and 2009, the proportion of people with at least secondary school diplomas among the training participants was 1.8-2 times higher than their share among the unemployed, since 2010 this ratio has fallen to around 1.5 (Figure 5.4.2).



Figure 5.4.2: The distribution of training participants in terms of their educational

Note: The number of job seekers and the distribution of their educational attainment were calculated on the basis of NES data, we used data from 2015 for the ratio of

high school and vocational high school or technicum graduates, in the absence of 2016 breakdown. The public employment data for 2011–2012 are from the calculation of Ágota Scharle based on the semi-aggregated branch level data obtained from the FOKA database, and show the monthly average of the participants, for the period 2013–2016, the public employment data were calculated on the basis of the BM Public Employment Portal data. For 2010 and the preceding period, the number of public employees was calculated on the basis of the actual number at the end of October, the breakdown by educational level was considered constant in the absence of data, the proportions were based on the average distribution between 2011 and 2013.

Source: NES, BM Public Works Portal, FOKA.

The selection of participation in training programmess and their effects

The data

Our analysis is based on the personal data from the unemployment register. The complete sample of training participants and a 10% random sample with replacement of non-participant job seekers was used for the analysis.^{2,3} The database covers those who (1) either had registered jobseeker or public worker status on January 1st, 2010, or (2) entered the unemployment registry or a public works programme⁴ between January 1st, 2010 and December 31st, 2014, or (3) entered supported training in this period.⁵ From training programmes, we exclude those related to public works (so-called winter public works programmes, for more information see *Busch*, 2015), as their content significantly deviated from the retraining provided to registered job seekers.⁶

The selection into training participation

In the first step, we present the characteristics of training participants; subsequently, we examine which factors explained admission to training programmes in each year with linear probability models. *Figure 5.4.3* shows the composition of jobseekers participating in training during this period, based on their educational qualifications. Between 2010 and 2014, the composition of training participants was relatively stable in terms of their educational qualifications. There was a slight increase in the proportion of jobseekers with low, maximum primary school qualifications. We see a similar picture when looking at the factors of age and labour market experience. The proportion of those aged below 25 increased from 35% to 40%, the proportion of those with no earlier labour market experience increased from 21% to 31% between 2010 and 2014.

The composition of training participants is determined by two mechanisms: the selection to registered unemployed status, namely the composition of job seekers, and, the selection from jobseeker status to training. *Table 5.4.1* shows how the probability of training participation is influenced by the job seekers' characteristics. We estimated linear probability models in each year. On the left hand side of the models there is a binary variable capturing job-

2 Sampling of non-participant jobseekers was needed for technical reasons.

3 Comparing to the earlier, Hungarian version of this chapter, this version was updated in three ways. First, in the earlier version, we only used a 10% random sample of training participants. Second, in the meantime, we gained access to employment data and examined the effects of training on the probability of formal employment (and not on the probability of exiting unemployment status). Third, we extended the control group with those in public works.

4 In 2010, the data do not register those on all public works programmes, only those on a small-scale public works scheme ("közhasznú munka" in Hungarian).

5 Those individuals who, besides the training, received other active measures were kept in the sample; at the same time, those individuals who entered a retraining program from a nonregistered job seeker status were discarded.

6 Although nearly half of the training programmes (47.8%) developed basic competences, a third of them were semi-skilled programmes and only about a fifth of them were OKJ training in 2013, in 2014, the proportion of basic training programmes decreased to below 1%, while the rate of OKJ training leapt to over 62% (*Busch*, 2015).

seekers' training participation, while on the right hand side their individual characteristics. These characteristics were: educational attainment, age, gender, being labour market entrant, whether worked at least one day in the previous calendar year, whether spent at least one day in unemployment in the previous calendar year, whether spent at least one day in public works in the previous calendar year, the date of entering unemployment, and the employment centre's code (employment centre fixed effect). In *Table 5.4.2*, training programmes are differentiated based on whether their lengths exceed 90 days, as longer training courses typically aimed at providing a professional (vocational) qualification, while shorter courses are more heterogeneous.⁷



Figure 5.4.3: The composition of participating job seekers according to their educational attainment

Source: Own calculation based on the unemployment register data.

T	ab	le	5.	4.	1:	Se	lection	into	training,	by t	he ye	ear of	trai	ning	entry
									U /						

	Entering training in							
	2010	2011	2012	2013	2014			
Education. Base category: at most lower-secondary degree								
llopor coopdan, dograa	0.14***	0.23***	0.19***	0.17***	0.07***			
opper-secondary degree	(0.006)	(0.009)	(0.006)	(0.006)	(0.004)			
Tortian dograd	0.05***	0.02***	0.03***	0.06***	0.02***			
	(0.007)	(0.013)	(0.010)	(0.011)	(0.008)			
Ara balow 25	0.05***	0.08***	0.09***	0.11***	0.09***			
Age below 25	(0.005)	(0.008)	(0.007)	(0.008)	(0.007)			
Male	0.01***	0.04***	0.03***	0.03***	0.02***			
Male	(0.004)	(0.006)	(0.006)	(0.004)	(0.004)			
Labour market entrante	0.02***	0.05***	0.07***	0.08***	0.03***			
	(0.005)	(0.008)	(0.008)	(0.007)	(0.008)			
Unomployed in the provious calendar year		-0.08***	-0.18***	-0.25***	-0.63***			
onemployed in the previous calendar year		(0.006)	(0.008)	(0.009)	(0.008)			
Employed in the provious calendar year		0.04***	0.08***	0.09***	0.01***			
Linployed in the previous calendar year		(0.005)	(0.005)	(0.004)	(0.004)			
Public worker in the previous calendar year		-0.06***	-0.06***	-0.06***	-0.04***			
		(0.020)	(0.008)	(0.006)	(0.004)			
No. of obs.	34,217	23,516	35,831	50,680	62,967			

7 This latter category can have as an objective: (a) development of basic competences and motivation, (b) courses for obtaining a specific license (fork-lift driver etc.) and (c) financial and entrepreneurial skills formation.

Note: Linear probability models to predict the probability of training participation in each year. Each column is derived from a separate estimate. Other control variables not indicated in the table: branch office FE, date of entry into the register. Clustered robust standard errors at the settlement level are in brackets.

 $p^* < 0.1, p^* < 0.05, p^* < 0.01.$

Source: Own estimates based on unemployment registry data.

Table 5.4.2:	Selection	into	training,	by the	length o	f trainings

					Entering	training in					
	2010		20	2011		2012		2013		2014	
	≤ 90	> 90	≤ 90	> 90	≤ 90	> 90	≤ 90	> 90	≤ 90	> 90	
	days	days	days	days	days	days	days	days	days	days	
Education. Base category: at most lower-secondary degree											
Upper coondany degree	0.20***	0.18***	0.14***	0.27***	0.10***	0.21***	0.09***	0.19***	0.03***	0.06***	
upper-secondary degree	(0.011)	(0.007)	(0.010)	(0.010)	(0.008)	(0.006)	(0.010)	(0.006)	(0.004)	(0.005)	
Tortian dograa	0.17***	0.20***	0.18***	0.35***	0.12***	0.26***	0.05***	0.20***	0.01^{*}	0.03***	
	(0.016)	(0.009)	(0.021)	(0.015)	(0.018)	(0.012)	(0.016)	(0.012)	(0.007)	(0.008)	
Mae below 25	0.05***	0.07***	0.06***	0.09***	0.05***	0.10***	0.06***	0.12***	0.03***	0.08***	
Age Delow 20	(0.010)	(0.006)	(0.011)	(0.009)	(0.009)	(0.007)	(0.008)	(0.008)	(0.005)	(0.006)	
Mala	0.06***	0	0.07***	0.01**	0.08***	0.00	0.08***	0.00	0.04***	-0.01**	
Male	(0.009)	(0.006)	(0.007)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.004)	(0.004)	
Labour market entrante	0.06***	0.03***	0.11***	0.06***	0.10***	0.09***	0.08***	0.09***	0.02**	0.04***	
	(0.013)	(0.006)	(0.015)	(0.009)	(0.014)	(0.009)	(0.011)	(0.008)	(0.006)	(0.007)	
Unemployed in the previous			-0.22***	-0.12***	-0.50***	-0.23***	-0.57***	-0.30***	-0.77***	-0.69***	
calendar year			(0.009)	(0.007)	(0.012)	(0.010)	(0.019)	(0.011)	(0.008)	(0.007)	
Employed in the previous			0.04***	0.04***	0.07***	0.08***	0.08***	0.09***	0.01***	0.00	
calendar year			(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.004)	(0.003)	(0.003)	
Public worker in the previ-			-0.04**	-0.06***	-0.02***	-0.05***	-0.04***	-0.05***	-0.02***	-0.03***	
ous calendar year			(0.020)	(0.020)	(0.006)	(0.008)	(0.005)	(0.006)	(0.003)	(0.003)	
No. of obs.	13,924	25,289	13,388	19,378	20,389	30,676	30,841	43,916	53,588	56,651	

Note: Linear probability models to predict the probability of training participation in each year. Each column is derived from a separate estimate. Other control variables not indicated in the table: branch office FE, date of entry into the register. Clustered robust standard errors at the settlement level are in brackets.

p < 0.1, p < 0.05, p < 0.05, p < 0.01.

Source: Own estimates based on unemployment registry data.

Examining the selection of entering training, it seems that the effect of educational attainment on the probability of entering training slightly decreased between 2010 and 2014 (*Table 5.4.1*). In 2010, job seekers with at least an upper-secondary degree were 14 percentage points more likely to enter training than those with at most a lower-secondary degree. By 2014, this surplus decreased to 7 percentage points. On the other hand, the positive selection of training participants (cream skimming) is underlined by the fact that those who worked in the previous calendar year are more likely, while those who were unemployed or public worker in the previous calendar year are less likely, to participate in training.

Table 5.4.2 shows that there is no difference between shorter (max. 90 days) and longer (longer than 90 days) training programmes in terms of change of

selection. It is true for both the shorter and longer training programmes that the magnitude of influence of individual factors, especially educational attainment, has decreased between 2010 and 2014. Nevertheless, job seekers with higher educational qualifications were more likely to enter longer training programmes in every year.

The effects of training participation on employment

The causal effect of training participation is estimated using statistical matching. Our main identification assumption is that we observe all variables driving training participation and employment outcomes (age, gender, educational attainment, date of entering unemployment, employment experience, the number of days spent in unemployment/public works/employment in the previous calendar year, career entrant status); thus, no unobserved variables exist that might simultaneously influence both. We estimate the impact of training programmes on the probability of being employed: we assume that if training was effective, training participants would be more likely to be employed after the training, but not before.

We use nearest neighbour matching based on estimated participation probabilities (propensity scores) on the subsamples of training participants who entered training in one particular month (treated), and, on the 10% random sample of jobseekers in registered unemployed or public worker status in the same month (controls). We estimate the propensity scores using probit models separately in each month of 2010-2014 and complete the matching procedure on the common support.⁸ We match at least one neighbour to each treated individuals (i.e., the one with the closest propensity score on the common support), and we estimate both average treatment effects (ATE) and average treatment effects on the treated (ATET). The ATE capture the effects of training on an average unemployed person, based on the characteristics of both treated and control individuals, whereas the ATET capture the effects of training on the actual training participants. As will be seen from our results, ATE are a bit larger than ATET, because training participants are positively selected vis-à-vis non-participant jobseekers, and, the impact of training is larger for jobseekers with lower initial labour market potential.

The outcome indicator we use is employment status following the training, and, for robustness check, we estimate the "effect" of training before it had taken place as well. Practically, we construct a set of outcome variables capturing whether jobseekers were employed on every 180th day between January 1, 2010 and December 31, 2014. For each year, we estimate the yearly average of monthly treatment effects, and plot the probability of employment in the treated and control groups for each 180th day.

Figure 5.4.4 shows the probability of employment on the matched sample (i.e. after eliminating individual differences) in the treated and control groups,

8 The results of the estimated probability models and the balance of the sample after matching can be obtained from the authors. before, during and after the training. Before the training, there are no differences in the probability of employment between the treated and control groups; thus, our matching approach seems to be valid. In the year of the training, the probability of employment drops in the treated group: they are not likely to work as they participate in training; this is the so-called lock-in effect. After the training, the probability of employment goes up by 7-10 percentage points each year, and, at least in the sample of those observed for more years after the training (i.e. those in training in 2010-2012), the effects do not vanish in the mid-term. Also note that the probability of employment decreases in both the treated and control groups before training as they gradually enter unemployment; this phenomenon is the well-documented Ashenfelter's dip.



Figure 5.4.4: The effect of training on the probability of employment, by the year of training entry

Treated Control, ATE Control, ATET

Note: The yearly effects are the sample size-weighted averages of the monthly effects. The employment probabilities of the treated group are average employment probabilities of the treated group in the matched samples. The employment probabilities of the control group are set as the employment probabilities of the treated group in the matched samples minus the estimated average treatment effects (ATE) or average treatment effects on the treated (ATET).

Source: Own estimates based on unemployment registry data.

Figure 5.4.5 shows the results broken down by length of training.⁹ In the case of training programmes longer than 90 days, the lock-in effect is longer than that of shorter courses. In the case of training courses shorter than 90 days, we measure the effects of 4-10% points at the end of the first calendar year after training. In the case of long training courses, it is about a year and a half

9 Our data contain the actual lengths of training participation, not the intended (official) lengths of training. Thus, for example, if a jobseeker dropped out of an officially 6-month training programme after 80 days, the data show 80 days (and not the 6 months). This fact may introduce a bias into our estimates in the sense that if some jobseekers dropped out of a longer-than-90-day training programme after less-than-90days because they found a job in the meantime, we overestimate the effects of shorter training participation.

after entering training that the probability of employment exceeds that of the control group. Considering jobseekers participating in training in 2010 and 2011, it seems that the medium to long term effects of shorter and longer training programmes do not differ in a statistical sense. This does not necessarily mean that the same training in shorter form is equally as effective in the long term as the longer one. In the database we use, we do not see the type (OKJ training, IT training, etc.) and the content of training (profession, language training, etc.). Nevertheless, we may assume that job seekers with different individual characteristics get into short or long training programmes, which alone determines how quickly they find employment after the given training.

Figure 5.4.5: The effect of training on the probability of employment, by the length of training



Note: The yearly effects are the sample size-weighted averages of the monthly effects. The employment probabilities of the treated group are average employment probabilities of the treated group in the matched samples. The employment probabilities of the control group are set as the employment probabilities of the treated group in the matched samples minus the estimated average treatment effects on the treated (ATET).

Source: Own estimates based on unemployment registry data.

The effects of training participation on the days spent in employment are summarized in *Table 5.4.3*. The positive effects of short training programmes occur already in the first calendar year after entering training when training participants spent 24–68 more days in employment than matched control non-participants. Starting from the second year after training, the order of magnitude of the effects varies between 26–50 days and stays at this level throughout the observation period. In the case of long training programmes, due to longer lock-in effects, the positive impact may appear only a year later, but, this is not necessarily the case. In this timeframe, it seems that the effects of short and long training programmes equalize after three years.

	Effe	ects on the number o	of days in employmen	t in
	2011	2012	2013	2014
Entry to training in 2010				
All training	-2.050	19.06***	24.45***	25.71***
SE	3.231	3.726	3.796	3.836
≤ 90 days	26.39***	31.93***	31.55***	31.19***
SE	5.846	6.489	6.455	6.512
>90 days	-14.33***	14.07***	20.89***	23.13***
SE	3.707	4.421	4.530	4.578
Entry to training in 2011				
All training		-9.36**	20.43***	26.74***
SE		4.466	5.140	5.329
≤ 90 days		23.64**	25.66**	34.13***
SE		8.406	9.310	9.678
>90 days		-25.37***	17.89***	24.08***
SE		4.816	5.774	5.961
Entry to training in 2012				
All training			4.380	34.59***
SE			4.132	4.752
≤ 90 days			47.78***	49.97***
SE			8.503	9.392
>90 days			-10.30**	28.04***
SE			4.544	5.442
Entry to training in 2013				
All training				11.93***
SE				3.69
≤ 90 days				67.59***
SE				6.91
>90 days				-7.23*
SE				4.16

Note: Results after matching, average treatment effects on the treated (ATET). The yearly effects are the sample size-weighted averages of the monthly effects. SE refers to robust standard errors.

p < 0.1, p < 0.05, p < 0.05, p < 0.01.

Source: Own estimates based on unemployment registry data.

The potential effects of shorter and longer training programmes are determined by at least three components: the selection of jobseekers into the two types of training; the relative quality of the two types of training; and, as we have seen, longer training courses have a longer lock-in effect. On the sample of participants in 2010 and 2011, we observed that in the short term, the effect of shorter training courses appears sooner, but in the long term, the effects of shorter and longer training programmes did not differ in a statistical sense. This may be due to the trade-off between the positive impacts of longer training and the negative impacts of longer lock-in periods: longer training programmes are likely to increase the human capital of participants more, however, at the same time, the lock-in effect keeps them away from the labour market longer and can make finding a job more difficult.

The potential selection to shorter and longer training and its impact on their employment effects are examined in *Table 5.4.4*.

	Low-ed	ucated	High-educated Entering training in				
	Entering	raining in					
	≤ 90 days	> 90 days	≤ 90 days	> 90 days			
Effects 1 year after training							
2010	37.50***	7.86	13.66	-30.67***			
SE	7.187	5.008	9.150	5.185			
2011	38.46***	5.34	14.33	-39.77***			
SE	10.026	6.733	12.887	6.568			
2012	49.22***	8.32	42.81***	-24.48***			
SE	10.340	6.085	13.670	6.451			
2013	58.00***	9.37*	84.36***	-21.00***			
SE	8.731	5.476	11.230	5.740			
Effects 2 years after	training						
2010	39.36***	31.11***	23.65**	2.31			
SE	8.031	6.067	9.988	6.125			
2011	41.49***	40.96***	19.580	4.62			
SE	10.886	8.276	13.775	7.702			
2012	56.90***	42.21***	40.97**	18.34**			
SE	11.631	7.480	14.847	7.591			
Effects 3 years afte	r training						
2010	38.26***	36.53***	25.70**	9.66			
SE	8.253	6.285	9.754	6.231			
2011	45.22***	50.86***	27.01 [*]	10.88			
SE	11.444	8.615	14.210	7.957			

Table 5.4.4: The effect of training on the number of days spent in employment, by
educational level and the length of training

Note: Results after matching, average treatment effects on the treated (ATET). The yearly effects are the sample size-weighted averages of the monthly effects. SE refers to robust standard errors.

* p < 0.1, ** p < 0.05, *** p < 0.01.

Source: Own estimates based on unemployment registry data.

If less (or more) educated jobseekers are more (or less) likely to participate in longer training, this mechanism could affect the effectiveness of training in two ways. On the one hand, low-educated jobseekers are in a worse initial labour market situation, and therefore, for them, the marginal effect of longer training might be greater (assuming decreasing returns). On the other hand, it is also possible that high-educated jobseekers, who face employment barriers that we do not observe in the data, are more likely to participate in longer training than high-educated jobseekers not facing such barriers. Thus, for them, the potential impact of longer training might be hindered by their unobserved labour market disadvantage. *Table 5.4.4* shows the impacts of short and long training for low-educated (i.e., those having at most a lower-secondary degree) and high-educated (i.e., those having at least a higher-secondary degree) jobseekers. The impact of training on the employment probability of low-educated jobseekers seems to be more pronounced, especially in the case of long training. The lock-in effect of long training is significantly higher for high-educated jobseekers. In fact, we find very weak evidence that long training programmes are effective at all for high-educated jobseekers.

Summary

Finally, we briefly discuss the extent to which an expansion of training programmes and the modification of their objectives can lead to positive results. In the period under review compared to the first half of the 2000's, a significantly smaller proportion of job seekers entered supported training, at the same time, the positive selection of training participants based on educational attainment decreased. The latter is a positive development as our results show that training is more effective for low-educated jobseekers. However, it is unfortunate that in the course of 2015 and 2016, there were fewer than 8.5 thousand training participants with at most lower-secondary school education, while between 2012 and 2014, this figure was almost double. From our analysis, it is also apparent that longer training programmes do not necessarily lead to greater effects in the medium term (3-4 years after entering training) than shorter courses.¹⁰ In other words, it is conceivable that a greater number of the relatively shorter programmes, targeting job seekers with a lower educational attainment, can significantly improve employment (and mitigate the labour shortage) within the foreseeable future (1-2 years).

10 In recent years, the regulatory background of training for job seekers also changed, which, through the selection and targeting of the training, could have also influenced their efficiency. The National Institute of Vocational and Adult Education has opened on December 15, 2014, in turn, the National Labour Office was closed on January 1, 2015, in the new structure, training targeting job seekers is managed by the Deputy State Secretary for Vocational Training and Adult Education under the Minister of National Economy (Cseres-Gergely-Varadovics, 2015).

References

- BUSCH IRÉN (2015): Winter public works. In: Fazekas Károly–Varga Júlia (eds.): The Hungarian Labour Market 2015. Institute of Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Budapest. pp. 144–147.
- CSERES-GERGELY ZSOMBOR (2015): The composition of entrants to public works, 2011–2012. In: Fazekas Károly–Varga Júlia (eds.): The Hungarian Labour Market 2015. Institute of Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Budapest. pp. 119–127.

CSERES-GERGELY ZSOMBOR-VARADOVICS KITTI (2015):

Labour market policy tools. February 2014 – April 2015. In: *Károly Fazekas–Júlia Varga* (eds.): The Hungarian Labour Market 2015. Institute of Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Budapest. pp. 173–198.

SCHARLE ÁGOTA (2016): Labour market policy tools (May 2015 – March 2016). In: Blaskó Zsuzsa–Fazekas Károly (eds.) The Hungarian Labour Market 2016. Institute of Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences, Budapest. pp. 169–178.