

## 2.3. PUBLIC WORKS PROGRAMMES IN THE PUBLIC EMPLOYMENT SYSTEM, 2011–2013 – BASIC FACTS

ZSOMBOR CSERES-GERGELY & GYÖRGY MOLNÁR

Public works has been the most significant employment policy programme since 2010 both in terms of spending and the number of participants. For 2015 the Government has envisaged the participation of 200 thousand persons in public works and allocated 270 billion HUF from the national budget.

The public works portal of the Government<sup>1</sup> was launched on 25 March 2015, which provides, among others, basic statistical data from the beginning of 2013. However, it does not sufficiently describe the important features of the programme because of the period covered and the definitions applied. The situation is further aggravated by separation of the management of, and government data on, public works and related training as well as other labour market programmes.

There are two regularly published sources available on the preceding period (see also Sub-chapter 2.2.). One of these is the publication of the National Labour Office (NLO), closed on 31 December 2014, on the number of participants involved in active labour market policies (*Tajti*, 2012, *Mód*, 2013) and the other is the table included on the last pages of the report “Salaries” (entitled “Headcounts and Salaries” previously) of the Central Statistical Office (CSO).<sup>2</sup> The publication of the NLO is quite detailed but only uses the special term “headcount of participants involved” (or more specifically: net headcount of participants involved). The CSO publication uses the term “average monthly headcount”, but the groups included change annually even after 2011, which strongly limits comparability. The CSO data, going back to 2013, have recently been re-published in a modified structure in the Stadat database.

Vertically consistent data on the average headcounts of Hungarian public works programmes between 2011–2013 were first published in the studies Molnár et al (2014) and Cseres-Gergely-Molnár (2014). In the present study public works programmes are examined from a broader aspect, as part of the client path, ideally approaching work on the open labour market, undertaken by the unemployed in the *public employment system*,<sup>3</sup> defined as the services, supports and programmes of the Public Employment Service and other governmental authorities. We made our calculations using the primary data set provided for us by the National Labour Office (NLO), stored in the Data-bank of the MTA KRTK.

First this data set is presented below as well as the relevant details of data processing. Then the share of beneficiaries of the public employment system

<sup>1</sup> <http://kozfoglalkoztatas.kormany.hu>

<sup>2</sup> <http://www.ksh.hu/earnings>

<sup>3</sup> Note that this concept does not exist in the literature, but is our definition. Its similarity to the known concept “Public Employment Service” (PES) is partly a play on words, partly a deliberate choice: it is an extension of the PES by other related institutions.

in the individual programmes is examined. In this respect several statuses in the social welfare and public employment system are identified (only registered, participating in a programme or currently outside the system). The specific succession of these statuses is called “sequence”. The final part of the Chapter provides an overview of the most frequent sequences and their main characteristics.

### **The labour micro-database of MTA KRTK and the process of data cleaning**

#### *The main characteristics of the micro-database*

The research relied on the individual data of the Employment and Public Works Database (EPWD) of the (now closed down) National Labour Office.<sup>4</sup> The part of the database provided at our disposal contains the primary database of registered job seekers, participants of public works and other labour market programmes as well as beneficiaries of job seekers' allowance [álláskeresési járadék] and employment substitute allowance [foglalkoztató helyettesítő támogatás] between 1 January 2011 and 31 December 2013.

The data sets are based on episodes. Episodes are events in an individual's life with duration of potentially more than one day. Episodes are defined by four pieces of information: the individual concerned (personal data), the starting and closing date of the episode as well as its nature (registration, public works, training and other programmes and type of support). Episodes with differing characteristics are considered individual episodes even if they are related in time. Episodes may overlap only if they are registration and programme episodes.

In accordance with data protection rules, individuals are indexed by an artificial identifier; the following personal data are available: sex, age group, educational attainment, and place of residence (municipality). The starting date of the ongoing episodes of individuals already included in one of the registries on 1 January 2011 is also known. Since the system of public works was transformed completely on 1 January 2011, there was no episode of this kind that had commenced prior.

Since data from the registry of employees held at the tax authority (previously called Unified Hungarian EPWD, see Section 2.2) was not available to us, it is not known whether individuals leaving the public employment system take up employment or not – except for a monitoring undertaken 180 days after the end date of public works (discussed in Sub-chapter 2.6 in detail). Because of regulations on benefits it is likely that the majority of participants leaving and re-entering the system take up work in between but it is not certain. In case of those leaving the system and not re-entering it during the period concerned, not even this may be assumed.

<sup>4</sup> We wish express our thanks to the officials at the National Labour Office, especially to József Tajti Head of Department as well as Attila Kicsi, Péter Mód, Miklós Németh and János Papp for their valuable help.

### *Improving the consistency of the data set*

Public works participants are in principle removed from the unemployment registry and are re-entered upon finishing their participation in public works. However, the registry was not in accordance with this procedure and included public works participants in most cases. This duplication was corrected.

The case was similar for several other active labour market programmes. As for active labour market programmes, participants of training programmes<sup>5</sup> and public benefit works programmes were included in the registry, while the participants of the following programmes were not: wage (cost) support, support for becoming an entrepreneur, support for internship of young professionals, housing allowance, supporting the employment of individuals entitled to availability allowance<sup>6</sup> [*rendelkezésre állási támogatásra jogosultak foglalkoztatásának támogatása*] and local transport allowance. (A summary table of the headcounts of these programmes in 2011 and 2012 is published – Molnár et al, 2014, p. 72.) Discrepancies were also corrected in these cases.

Occasionally, (public works or other) programmes or episodes overlapped in time. This was probably due to failing to close down the earlier programme in the registry. We merged overlapping or directly contiguous registration episodes. In case of programmes overlapping in time, we closed the earlier one on the starting date of the subsequent one. These changes only concerned less than 1 per cent of the episodes.

It was an important issue to decide what to do with programmes following one another in a very short time (often a few days). They accounted for a few per cent of the episodes. It was considered that they be merged. However, thorough analysis showed that they are not due to registration mistakes but individual programmes with different characteristics. It may have also happened that the break between the two programmes was actually longer than shown but the earlier programme was not closed on time – but it was not possible to correct it. The seemingly technical decision may have an impact on the proportions of participants entering the open labour market from public works (or other programmes).

For example, one day after the closure of a public works episode a new one is started, which lasts for more than six months, following which the participant concerned takes up employment on the open labour market. At the time of monitoring, in 180 days after the end of the first episode, the participant is not working on the open labour market, while in 180 days after the second he is, which gives a 50% rate of finding employment. If the two episodes are merged, monitoring only takes place after the second episode and this results in a success rate of 100%. Since the real issue is whether someone enters another public works programme after the first episode, we decided not to merge episodes following one another in a short time period.

<sup>5</sup> Except for the training provided for public works participants and training support provided through employers.

<sup>6</sup> The strangely named *availability allowance* is paid to the long-term unemployed whose health would enable them to participate in public works but they do not receive an offer at the moment. The name implies that they are available to public works. Later it was renamed as wage-substitute allowance [*bér-pótóló juttatás*] and then as employment substitute allowance [*foglalkoztatást helyettesítő támogatás*]. The monthly amount of 22,800 HUF (about 75 EUR) has been unchanged for years.

## Public works in the public employment system

From 1 January 2011 to 31 December 2013 nearly 1.8 million persons were involved in the public employment system for some length of time (*Table 2.3.1.*). A little more than a million of these (59%) entered the public employment system during the three years, while the others had already been within the system on 1 January 2011. If someone left the public employment system and re-entered it (maybe several times) during the period of the research, they were taken into account as one person. The relationship with the public employment system is a broader concept than being registered as unemployed; it supposes the fulfilment of at least one of the following three requirements (overlaps are possible):

1. registered unemployed,
2. participant of a public works programme,
3. participant of another active labour market programme.

**Table 2.3.1: The number of those involved in the public employment system between 2011 and 2013 and their share in the various programmes**

	Headcount (thousand persons)	Share (percentage)
Number of those involved in the public employment system	1774	100.0
Only registered	1180	66.5
In public works (total)	449	25.3
- without training	331	18.7
- with training	118	6.7
Other programmes	202	11.4
Total <sup>a</sup>	1831	103.2

<sup>a</sup> The number exceeds the number of participants of the public employment system and 100 per cent, because 57 thousand persons (equalling 3.2 percentage point) participated in both public works and other programmes.

Source: Authors' calculations based on the EPWD.

In the following, the succession of various employment statuses of the participants of the public employment system (taking into consideration the above limitations) will be discussed. Since the main objective is to analyse public works, the other active labour market programmes are presented together. There are five different statuses:

1. registered unemployed, not participating in any of the programmes (hereinafter *only registered*),
2. public works participant, not receiving training,
3. public works participant receiving training,
4. participant of another active labour market programme,
5. is outside the public employment system but was involved in the system sometime during the three-year period of the research and re-entered it.

Occasionally, status 2 and 3 are merged.

Precisely two-thirds of the 1.77 million persons involved in the social welfare and public employment system did not participate in any programmes, one quarter of them participated in public works sometime during the three years and somewhat more than one-tenth participated in another programme (*Table 2.3.1.*).

More than one quarter of the 450 thousand persons participating in public works during the three years took part in two different years and slightly less than one quarter of them were “regulars” and participated in it in each of the three years (*Table 2.3.2.*). In case of the other programmes, the share of participants taking part in the programme in two different years is basically the same but the share of participants taking part in a labour market programme in three years is insignificant.

**Table 2.3.2: Accumulation of participation in programmes in various years, 2011–2013 (percentage)**

	One	Two	Three	Total
	years' participation			
Public works	48.6	28.1	23.3	100.0
Other programmes	69.0	29.4	1.6	100.0

Source: Authors' calculations based on the EPWD.

Taking a look at the individual years separately reveals that the number of those involved in the public employment system did not change – it was only in 2012 that figures were five per cent higher than in the other two years (*Table 2.3.3.*).

**Table 2.3.3: The number of participants in the public employment system and the annual percentages of participants in the various programmes, 2011–2013**

	2011		2012		2013	
Number of participants in the public employment system (thousand persons)	1174		1226		1164	
Number and share of participants of programmes	Thousand persons	%	Thousand persons	%	Thousand persons	%
Public works (total)	236	20.1	234	19.1	315	27.0
- without training	234	19.9	222	18.1	201	17.2
- with training	2	0.2	13	1.0	114	9.8
Other programmes	81	6.9	85	7.0	101	8.7

Source: Authors' calculations based on the EPWD.

The number of participants in public works did not change between 2011 and 2012 but then significantly increased in 2013 due to public works including training. Their share within the participants of the public employment sys-

tem grew from slightly below 20% to more than 25%. Public works including a training element had scarcely existed previously. In 2013 the number and share of participants of other programmes also increased but part of this increase may have been virtual: while in 2011 and 2012 the proportion of participants (of public works and other programmes) taking part in the programmes repeatedly within a year was below one percentage point, this figure doubled in 2013 (this is not presented in a separate table). The thorough analysis of microdata showed that for some participants of public works including training, periods of various lengths were registered as labour market training. In fact, these were most likely to be elements of the same programme.

The total of days spent in the public employment system did not change during the three years examined (*Table 2.3.4.*). Participants took part in any of the programmes on slightly less than one-fifth of their days spent in the public employment system. The proportion of days spent in programmes increased from 14 to 23 per cent mainly due to public works. The proportion of days spent in public works including a training element increased less than the proportion of days spent in the public employment system. The number and proportion of days spent in other (not public works) programmes increased slightly.

**Table 2.3.4: The number and share of days spent in the public employment system, 2011–2013**

	2011	2012	2013	Total
Number of days in the public employment system (million)	263	266	266	795
Share (percentage)				
Only registered	85.7	80.2	77.0	80.9
Public works (total)	10.5	15.5	18.3	14.8
- without training	10.4	15.3	15.6	13.8
- with training	0.0	0.3	2.7	1.0
Other programmes	3.9	4.3	4.6	4.3
Total	100.0	100.0	100.0	100.0
Share of days spent out of / in the public employment system (percentage)	16.5	24.6	13.1	18.1

Source: Authors' calculations based on the EPWD.

The share of days spent outside the public employment system is a distorted indicator, since it necessarily has lower values in the first and last year than in the middle year. In 2011 it does not contain those who were within the system in 2010 and also re-entered later but were outside the system at the beginning of 2011. The case symmetrically applies to 2014. There are two reasons the proportion of the days spent outside the public employment system was nevertheless included in *Figure 2.3.4.* Figures for 2012 indicate that the persons involved in the public employment system spend – compared to the time within the system – 25 per cent of the time outside the system. Since there are some who

are in the public employment system throughout the whole year, the proportion of the time spent outside the system in the case of those repeatedly leaving and re-entering is significantly higher. This will be discussed in detail later.

It is worth noting that in 2013 relatively fewer days were spent outside the public employment system than in 2011, although the distortion described above should be symmetrical. Thus the volume in this case is not interesting but the difference between the two proportions is. This difference is highly likely to be due to the increase in the time spent in public works.

The average length of participating in public works grew from less than four months in 2011 to nearly six months in 2012 (*Table 2.3.5.*). Since the number of participants did not increase during this two year period (*Table 2.3.3.*), the increase in the number of days spent in public works was the result of the increase in the average length of participating in public works. The length slightly decreased in 2013 but remained above five months. On average, public works participants took part in public works for slightly less than nine months in the three years examined.

**Table 2.3.5: The average length of participation, 2011–2013 (number of days)**

	2011	2012	2013	2011–2013
Public works (total)	117	177	155	262
– with training	35	53	62	66
Other programmes	126	133	123	168

Source: Authors' calculations based on the EPWD.

The average length of participation in other labour market programmes was about four months in each of the three years. Because of multiple participation, the average length throughout the three years was 5.6 months.

The length of training organised in public works was two months on average in 2013. This requires two remarks as explanation. Considering that this programme was launched as part of the public works programme that started in December 2013 (see Sub-chapter 2.8), the length of the programmes is longer but data are not available from 2014. On the other hand, there is only one month of public works with a training element in 2013 (see *Table 2.3.2.*). The average of 66 days results from the fact that some persons participate in six-month or even one-year-long public works programmes including training.

### Average headcounts

The number of those involved in the public employment system did not change between 2011 and 2012 and basically the number of participants of other (not public works) programmes stagnated too. Redistribution of proportions was caused by public works, since the increase in public works participants was accompanied by a decrease (of the same extent) in the number of persons only registered but not taking part in any programmes (*Table 2.3.6.*). While in 2011

the number of public works participants was 2.7 times higher than the participants of other labour market programmes, by 2013 this figure increased to 3.9.

In 2011 more than half of the total headcount was employed four hours daily. This type of public works was discontinued in 2012 and only six- and eight-hour employment remained, with a strong predominance of the latter. Thus the full-time equivalent headcount for the three years increased even more between 2011 and 2012 (the final line of *Table 2.3.6.*).

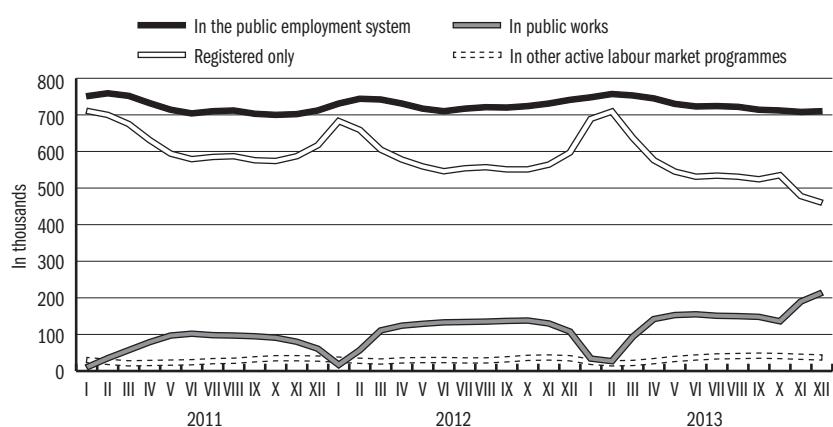
**Table 2.3.6: Average annual headcounts in the public employment system, 2011–2013 (thousand persons)**

	2011	2012	2013
Only registered	618	584	562
Public works (total)	75	113	133
- without training	75	111	114
- with training	0	2	19
Other programmes	28	31	34
Total	721	728	729
Full-time equivalent in public works	54	108	128

Source: Authors' calculations based on the EPWD.

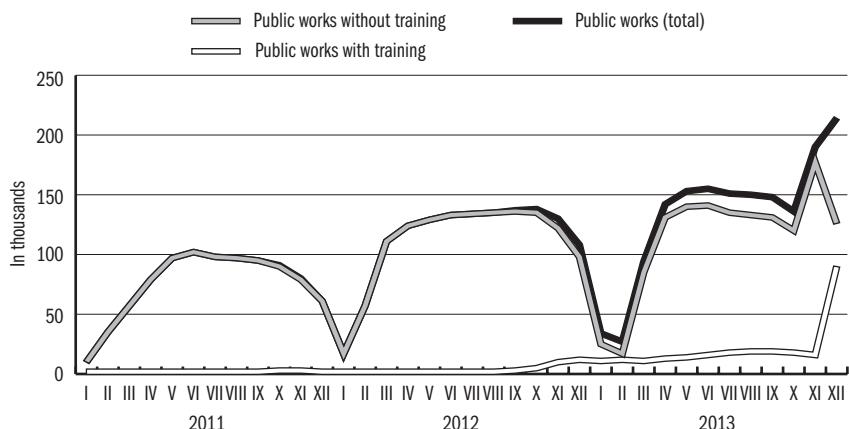
Monthly figures are similar to annual ones (*Table 2.3.1.*). Apart from seasonal fluctuation, the number of those involved in the public employment system is more or less stagnating, while the number of participants in programmes slightly increases without any fluctuation. Consequently, the headcounts of public works participants and those only registered mirror each other precisely. There is a strong seasonal decrease in the number of public works participants at the end of 2011 and 2012, which is offset by winter public works organised at the end of 2013.

**Figure 2.3.1: Average monthly headcounts in the public employment system (thousand persons)**



The proportion of public works including a training element or organised as training *per se* started to grow at the end of 2012 and then there was a sudden surge in November 2013. Although this increase was slight at the expense of public works without training, it mainly entailed a net increase (Figure 2.3.2.).

**Figure 2.3.2: Public works with and without training, monthly figures (thousand persons)**



### Characteristic individual paths in the public employment system

#### *The definition of a sequence*

When entering the public employment system, the majority of participants initially only become registered unemployed. After a while they either leave the system or receive some kind of “treatment”: they participate in public works or other active labour market programmes. Upon completing the programme, they either leave the system or become registered unemployed again. Those leaving the system also sometimes re-enter.

This section examines the typical paths taken by participants in the public employment system between 2011 and 2013. Merging the two types of public works programmes, we continue to differentiate between four statuses indicated by the following letters:

*R* = registered unemployed,

*W* = public works participant,

*P* = participates in another programme,

*O* = currently outside the public employment system but was involved previously and re-enters later.

The path of a person entering the public employment system is defined by the series of the daily statuses. A *full sequence* is the series of 1096 letters corresponding to the 1096 days between 2011 and 2013. This would be unmanageably long; therefore the days spent in the same status are merged. The se-

ries created in this way, containing information from the various episodes is called a *sequence*. The path of an individual registering initially as unemployed, then leaving the system after receiving labour market training (because of e.g. finding employment) but re-entering and registering as unemployed again before participating in public works is described by the following sequence: *R-P-O-R-W*. Sequences end if an individual leaves the system for good or the final date of the data set available is reached. This representation only takes into account the succession of episodes but not their length; however, in some cases their length will also be discussed.

A sequence may be further simplified by examining only the episodes of a path but excluding their succession. The above sequence then contains the following episodes: *WOPR*. In this case the elements follow one another alphabetically and in order to differentiate it from a sequence, no hyphens separate the letters.

### *The most frequent sequences*

The individual paths of the 1.8 million persons in the public employment system during the period examined is described by 4000 different sequences, the 20 most frequent of which are presented in *Table 2.3.7*.<sup>7</sup> These cover nearly 89 per cent of the people involved.

More than half of the participants entered into the register, did not participate in any programmes, left and did not re-enter. *Figure 2.3.3.* shows the length of the episode of those who entered and left the system during the period examined. The majority (53 per cent) leaves the system within 120 days. It is worth noting that the peak is on days 92–94, i.e. the days after the end of the disbursement of the job seekers' allowance. About one-third is still within the system after 180 days, without participating in any programmes – and after one year the number of participants with this status is still more than 40,000 persons.

Returning to the issue of sequences, the next large group includes the participants who left the public employment system and then re-entered but did not participate in public works or any other programmes. This may happen once or several times (see items 2, 4 and 15 in *Table 2.3.7*). The variations of staying in the registry and out of the system once or several times account for less than 16 per cent of the sequences, as seen in line 2 of *Table 2.3.8*. (Please note that *Table 2.3.8.* – as opposed to *Table 2.3.7.* – lists episodes within the various combinations not in the order of their occurrence but alphabetically.)

70 thousand of the 450 thousand public works participants participated in public works once and then became registered unemployed again (*R-W-R*). 42 thousand of them participated in public works after registration and then either left the public employment system or were still in public works at the end of 2013 (*R-W*: see line 6 of *Table 2.3.7*). Less than 7 per cent left the system as public works participants, while the others are still within the system.

<sup>7</sup> Calculations related to sequences were made using the features of the Stata sq programme package. Authors: *Ulrich Kohler, Magdalena Luniak and Christian Brzinsky-Fay*.

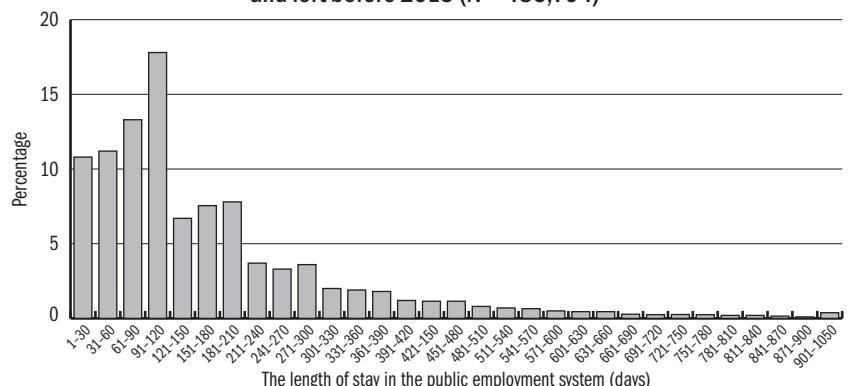
**Table 2.3.7: The most frequent sequences describing paths in the public employment system**

Number	Type of sequence	Headcount (thousand persons)		Proportion (percentage)	
		total	not right-censored <sup>a</sup>	total	not right-censored*
1.	R	899,560	688,849	50.72	65.06
2.	R-O-R	212,808	144,599	12.00	13.66
3.	R-W-R	69,554	35,801	3.92	3.38
4.	R-O-R-O-R	52,271	31,824	2.95	3.01
5.	R-P	46,200	29,616	2.60	2.80
6.	R-W	41,747	2,806	2.35	0.27
7.	R-W-R-W-R-W	34,600	321	1.95	0.03
8.	R-W-R-W-R	33,576	11,539	1.89	1.09
9.	R-W-R-W	29,841	855	1.68	0.08
10.	R-W-R-W-R-W-R-W	24,256	107	1.37	0.01
11.	R-P-R	22,385	13,895	1.26	1.31
12.	R-W-R-W-R-W-R	21,007	4,160	1.18	0.39
13.	R-O-R-W	14,770	581	0.83	0.05
14.	R-W-R-O-R	14,439	7,141	0.81	0.67
15.	R-O-R-O-R-O-R	12,794	5,703	0.72	0.54
16.	R-O-R-W-R	12,224	6,133	0.69	0.58
17.	R-P-O-R	10,608	6,146	0.60	0.58
18.	R-O-R-P	9,123	3,945	0.51	0.37
19.	R-W-R-W-R-W-R-W-R	7,989	26	0.45	0.00
20.	R-W-R-W-R-W-R-W-R	6,293	1,227	0.35	0.12
1-20. total		1,576,045	995,274	88.85	94.00
Total of sequences observed		1,773,743	1,058,773	100.00	100.00

<sup>a</sup> Not right-censored data means the participant left the public employment system before 31 December 2013.

Source: Authors' calculations.

**Figure 2.3.3: The length of staying in the public employment system of participants only registered who entered after 1 January 2011 and left before 2013 (N = 485,794)**



**Table 2.3.8: The combination of episodes in the various sequences and their share  
(N = 1,173,743 persons)**

Number	Type of sequence combination	Proportion (percentage)
1.	R	50.72
2.	OR	15.83
3.	WR	15.59
4.	WOR	6.48
5.	PR	4.62
6.	OPR	3.47
7.	WPR	1.83
8.	WOPR	1.39
9.	P	0.04
10.	W	0.02
11.	WP	0.00
12.	WOP	0.00
13.	WO	0.00
14.	OP	0.00
Total		100.00

Note: The episodes follow one another alphabetically in the combinations.

Source: Authors' calculations.

The situation is different for the sequence *R-P*. A relatively high number of participants, nearly 30 thousand, were registered as unemployed first and then left the system after one programme participation.

### Sequences containing public works

*Table 2.3.9.* presents the combination of episodes of *Table 2.3.8.* as well as their share. There is practically no sequence containing public works exclusively or public works and another programme; the majority of participants enter public works after at least a short registered unemployment. There are four main types:

1. the most frequent one is alternating registered unemployment and public works participation;
2. in about one quarter of the cases the above combination is interrupted by one or more periods spent outside the public employment system;
3. in 7 per cent of the cases participants also take part in other programmes in addition to public works;
4. in addition to the above (type 3), there is also time spent outside the public employment system.

In view of quitting public works permanently, the case of those not within the public employment system on the last day of the period examined is especially important. There are only 100 thousand persons like this out of the 450 thousand involved in the public employment system during the three years (*Table 2.3.9.*). The others (*WOR*, *WOP* and *WOPR* types) also left the

system after a public works episode but they were within the system again on 31 December 2013.

**Table 2.3.9: Share of combination of episodes containing public works**

Number	Type of episodes	Share (percentage)	
		total (N = 449,203)	Not right-censored (N = 99,139)
1.	WR	61.55	58.59
2.	WOR	25.60	29.41
3.	WPR	7.24	6.58
4.	WOPR	5.51	5.22
5.	W	0.08	0.15
6.	WP	0.01	0.01
7.	WOP	0.01	0.02
8.	WO	0.01	0.02
Total		100.00	100.00

Source: Authors' calculations.

Only 7 per cent of the 58 thousand persons belonging to type *WR* and leaving the system in the three-year period finished their path via public works; the others left the system from registered unemployed status. This may have a technical reason, which will be discussed later. The most frequent sequence (62 per cent) participants of this type went through is *R-W-R*, followed by *R-W-R-W-R* (20 per cent) and *R-W-R-W-R-W-R* (7 per cent). It is only 5 per cent that exit after a sequence of *R-W*. There are individuals alternating between the two statuses ten times.

The proportion of *WOR* types, i.e. those who were also outside the system in addition to being registered and participating in public works, is somewhat higher among the permanent leavers than in the whole sample. It seems that individuals who already have been outside the system are more likely to leave it again. This type is very varied: it includes more than 500 sequences. It has two relatively frequent forms (among the not right-censored cases): *R-W-R-O-R* at 24 per cent and *R-O-R-W-R* at 21 per cent. Less than 5 per cent of them leave the system after a public works episode.

The less significant *WPR* type also includes more than 400 different sequences. Leaving the public employment system is the most common in the case of the *R-W-R-P* sequence; more than 20 per cent of the WPR category belongs here. Among the leavers the share of the sequences *R-P-R-W-R* and *R-W-R-P-R* is more than 20 per cent. As opposed to public works, the share of those exiting from a programme not from registered unemployment is relatively high.

And finally, the last of the more significant groups includes those who went through all of the four types of episodes. Logically, there are more combinations than in the case of the previous types: it contains more than 1000 dif-

ferent sequences, none of which is outstandingly frequent. The most typical are sequences containing six or seven episodes (including time spent outside the system), the average length being 7.6 sequences. Similarly to the previous type, four times as many participants leave the public employment system from another programme as from public works.

Analysis of all the sequences containing public works and ending before the last day of 2013 reveals that in 95 per cent of them *the final episode is registered unemployment*, in more than 4 per cent it is *programmes other than public works* and in only slightly more than 0.5 per cent it is *public works*. As mentioned before, this may have a technical reason: after a completed public works episode, participants enter registered unemployment automatically, which may last for a few days even if finding employment. And in fact, in the case of 20 per cent of sequences ending in *W-R* the length of the final *R* episode is a maximum of three days. However, on average, the length of this final *R* episode is extremely high – 170 days – indicating that public works does not lead to exiting the system in the majority of cases.

*Table 2.3.10.* indicates the share of sequences containing a varying number of public works episodes among all the sequences containing at least one public works episode. The figures show that the overwhelming majority of those who left the public employment system during the three years examined only had one or two public works episodes.

**Table 2.3.10: The distribution of sequences according to the number of public works episodes**

The number of public works episodes	Share (percentage)	
	Total sequences (N = 449,203)	Not right-censored (N = 449,139)
1	44.1	68.2
2	23.7	21.5
3	18.0	7.4
4	9.8	2.2
5	3.2	0.6
6	0.9	0.1
7	0.3	0.0
8	0.1	0.0
9	0.0	0.0
10	0.0	0.0
11	0.0	0.0
12	0.0	0.0
Total	100.0	100.0

Source: Authors' calculations.

## Conclusions

Between 2011 and 2012 a total of 1.77 million persons were involved in the public employment system, including 1.37 million who spent more than 120 days in it. A surprisingly high number stay in the system for a considerably long time without participating in public works or other active labour market programmes. A total of 450 thousand participated in public works, including 100 thousand who exited the public employment system permanently during the three years. The others were within the system continuously or re-entered it after some time spent outside it.

The analysis of the path undertaken in the public employment system as well as the order and length of episodes shows that *it is less likely to exit the system from public works than from other programmes, and the more someone participates in public works, the less likely he/she is to leave the system*. Individuals who already spent time outside the system and then re-entered it are also more probable to leave it again. Please note that it is a concurrence of phenomena and not a cause and effect relationship: it does not ensue from the above that public works reduces the likelihood of leaving the system; it may as well hold true that individuals with no chance of exiting tend to become public works participants. Referenced earlier research, numerous micro level analyses and the findings of fieldwork indicate that it is not justified to think that long-term public works participants are not capable of doing productive work if they have the opportunity.

Sub-chapters 2.5. and 2.6. will address the issue of who tends to become a public works participant and Sub-chapters 2.9. and 2.10. will explore the factors related to entering the open labour market. As shown above, the time spent in the public employment system has a prominent role to play in this.