

## 2.10 WHERE DO PUBLIC WORKERS WORK?

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One of the frequently mentioned objectives of public works is to reintegrate the unemployed into the labour market. As to what constructions serve this objective best, depends on whether the unemployed are capable of finding a job and able to integrate without external assistance. If labor demand is high and the unemployed – once they try – easily find their place in genuine work organizations, then the system should be constructed in such a way as to promote entry into market jobs, e.g. by public works remuneration set below the minimum wage, by enforcing active job-seeking and periodically testing readiness for work. If, on the contrary, no jobs are available and integration is hopeless, then public works should be offered as a program of poverty relief, with government-created jobs, offering respectable breadwinning.

However, these are extreme cases, disregarding the heterogeneity of unemployed people and of labour markets. Even if limited in numbers, market jobs are available also for public workers in most regions of the country.<sup>1</sup> Moreover, it is certainly true that there is an *élite* among public works participants whom the employers could profitably employ once they gained direct information about them. While a carrot-and-stick approach to public works and poverty relief need not require that public works participants work in genuine business organizations, together with co-workers employed on a market basis, a policy promoting transition from public to market work can hardly be successful without such a requirement.

According to the data analyzed below the vast majority of Hungarian public workers – especially the unskilled – work in separated public works units. This tendency is stronger in depressed labour markets, suggesting that the considerations mentioned above are put in practice by local governments and labor offices. At the same time the level of segregation depends not only on the state of the labour market, but strongly affected by the regional proportion of Roma people.

### Data and estimation

Starting with 2011, the Wage Survey of the National Labour Office (abbreviated in Hungarian as NMH) differentiates public works participants from other employees. In the survey, the units of observation are the geographically distinct branches of firms, so the percentage share of public workers can be defined per site. The Wage Survey is a linked employer-employee data set providing information on the persons working in the firm. In this chapter we use year 2013 data on the public sector, where individual data is available for all employees working at the given site.<sup>2</sup> We observe 116,559 persons, 89%

1 The 24,195 public workers examined in Subsection 2.5 entered market jobs 54,833 times between 2003 and 2011.

2 This is true to institutions whose accounts are administered by the Treasury.

of the 131,104 public works participants reported by the Hungarian Central Statistical Office (*KSH*, 2013, p. 32). The deviation is due to slight differences between the sampling methods and the target groups covered.

Firstly we observe the percentage share of public workers per site, and repeat the analysis for unskilled employees (those with primary education or less). Secondly, we estimate – by limiting our calculations to unskilled workers – how the percentage of public workers at the site correlates with the rate of local unemployment.

The correlation between local unemployment and the share of public workers at the site is trivial if further factors are disregarded. If there are many unemployed people, then there are many potential public workers, and the expected share of public workers is high, especially if unemployment is high because few institutions in the settlement are suitable to employ public workers. Thus, besides the rate of local unemployment we will also control the equation for the percentage of public workers within the local population. The question is if we can still find a correlation between the rate of local unemployment and the percentage of public workers within a site.

Furthermore, we assume that the share of public workers within a branch depends on the size of the branch (a high percentage is less likely in an institution employing many people) and the size of the settlement (in a small village it is difficult or impossible to mix public workers with ‘genuine’ employees).

Finally, we have sufficient empirical knowledge to expect correlation between the extent of segregation and the percentage of Roma people in the population.

The data on the size of branches and the share of public workers is derived from the Wage Survey conducted in May 2013.

We measure unskilled unemployment by the percentage of unemployed and inactive people, aged 15–59, with a primary education background, within the respective population, taking into account that the majority of people with such an education, if non-employed, is not actively searching for a job.<sup>3</sup> The indicator defined in this way will be referred to as “unemployment”, for the sake of brevity. Data of such detail is available only from the census, which reflects the situation in October 2011. The resulting bias is insignificant because big changes in the relative situation of settlements were unlikely to occur between October 2011 and May 2013. The same applies to the size of settlements, which is also taken from the 2011 census.

The occurrence of public works per settlement was measured using the register of the National Labour Office. The variable in the equation is the number of public works episodes started in 2013 per one thousand inhabitants.

The percentage of the Roma is also taken from the 2011 census. In this case we can rely only on district-level (NUTS-4) data because the Central Statistical Office prohibited the releasing of settlement-level indicators in

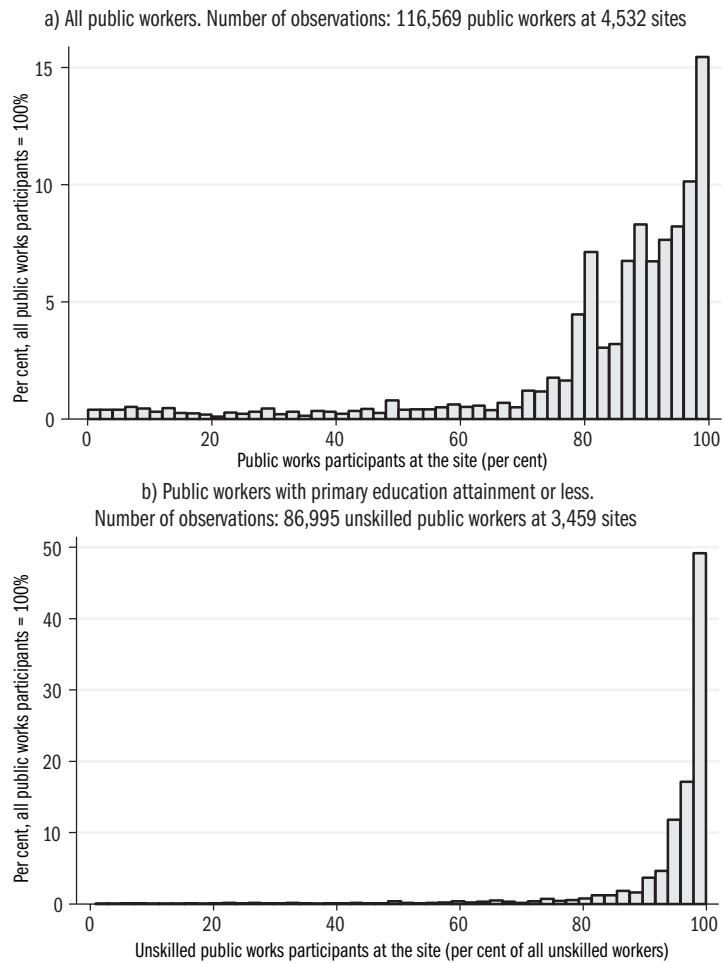
<sup>3</sup> In the third quarter of 2013 only 25% of the unskilled population neither in employment nor in education were searching for a job actively, and thus considered unemployed in the Labour Force Survey (Author's calculation).

the form of a database. The changes over time must have been similarly insignificant.

*With whom do public workers work?*

Histogram a) of Figure 2.10.1 shows the share of public works participants within public sector establishments. In the majority of cases the shares were above 80%, with an average of 79.8% and a median of 88.2%. Less than one quarter of the public workers were employed at a site where their share fell short of 75%. In 40% of the cases the percentage of public workers employed at the site exceeded 90%.

**Figure 2.10.1: The share of public workers within public sector establishments, May 2013 (density function, per cent)**



Source: Wage Survey, May 2013, public institutions, data on sites employing at least one public worker.

Data related to unskilled workers show an even more extreme picture: the average share of public workers working within the branch amounted to 93% with a median of 98%. In 36% of cases all unskilled employees observed at the site were public works participants.

*The within-branch share of public workers and local unemployment*

The regression results are shown in *Table 2.10.1*. The degree of segregation of unskilled public workers is, as expected, stronger in small settlements and small sites and in municipalities where there are many unskilled public workers. Local unemployment and the number of Roma has a strong influence even after controlling for these factors.

**Table 2.10.1: The within-branch share of public workers and local unemployment –regression results**

Dependent variable: The share of unskilled public workers within unskilled employees (logarithm)<sup>a</sup>

	Coefficient	t-value
The share of unemployed and inactive people, aged 15–59, with primary school attainment in the settlement (logarithm) <sup>b</sup>	0,2469	6.23
Public works episodes started by unskilled workers per thousand unskilled inhabitants in the settlement (logarithm) <sup>c</sup>	0,0035	2.50
Size of the site (persons) <sup>a</sup>	-0,0012	4.89
Square of the size of the site /1000	0,0004	2.18
Population of the settlement (thousand persons) <sup>b</sup>	-0,0366	9.26
Square of the population of the settlement	0.0006	8.45
The share of Roma (district-level, logarithm) <sup>b</sup>	0,0716	5.68
Constant	0.0979	3.60
<i>R</i> <sup>2</sup>		0.1717
Number of sites		3,378

Sample: Public sector work-sites employing unskilled public workers

<sup>a</sup> Wage Survey 2013, public sector.

<sup>b</sup> Census, 2011

<sup>c</sup> National Labour Office public works register, 2013. In municipalities where no episode started (421 cases), we imputed a value of  $\ln(0.5/1000)$

The coefficient of local unemployment is a rounded 0.25, meaning that a 10% difference in unemployment shifts the share of public workers by 2.5%. The standard deviation of the unemployment rate is 12% around an average of 57%, which anticipates a difference of 3%. The predicted share of unskilled public workers employed in branches operating in the first (works) decile of municipalities is 87% while it is 64% in the tenth (best) decile. This is an economically significant difference: for the median site (21 persons) 3 and 8 “genuine” employees for 18 and 13 public workers, respectively.

A 10% increase of the share of Roma within the population implies a 0.7% higher share of public workers within the site. A one standard deviation difference in the percentage of Roma makes an effect of 0.8%.<sup>4</sup> However, this

<sup>4</sup> For descriptive statistics of estimation sample see *Table A2.10.1* in Appendix 2.10.

effect is weak and statistically not significant where unemployment is high and public workers – either Roma or not – are in any event difficult to employ in market jobs (*Table 2.10.2*).

**Table 2.10.2: The effect of the district-level share of Roma on the within-branch share of public workers at different levels of unemployment – regression results**

Quintiles of work-sites by local unemployment levels	Coefficient	t-value	Number of sites
First and second quintiles (low unemployment)	0.061***	3.35	1,317
Third quintile (medium unemployment)	0.128***	4.02	682
Fourth and fifth quintiles (high unemployment)	0.036*	1.88	1,379

Dependent variable: Logarithm of the share of public workers at the work-site. Explanatory variables: logarithm of the district-level share of the Roma, and the control variables in Table 2.10.1.

Significant at the level of \*\*\*1%, \*\*5%, \*10%.

Source of data: see note to Table 2.10.1

The degree of segregation is significantly higher where low unemployment is coupled with a high percentage of Roma. The effect is strongest where unemployment is at a medium level, exactly the locations where it would be the most advisable that public workers get into direct contact with potential employers and co-workers, and this is particularly true in the case of a discriminated minority.

### Conclusions

Less than one quarter of public workers are employed at a site where their percentage share remains below 75%. As much as 36% of unskilled public works participants work in an institution where their share is 100%. Their share amounts to a mean of 93% and a median of 98%. The vast majority of these people have no opportunity to meet colleagues employed with a work contract.

Segregation works against reintegration since it offers no opportunity to employers to gain first-hand information regarding the readiness to work and performance of the public works participants. This outcome is unavoidable in regions where finding a market job is hopeless. The question in these areas is rather how a remuneration below the minimum wage can be justified and why arbitrary calls to do public works are allowed. Efforts in these municipalities should clearly be targeted at poverty relief which presupposes a low but decent remuneration and access to temporary (illegal) work, household production, subsistence farming and gathering.

Data shows that in the more fortunate regions of the country segregation – as expected – is lower than the average, though also strong, which could hardly be changed without a revision of the whole concept of public works. Remuneration below the minimum wage seems dysfunctional in this case,

too, because in a work organization different payments for the same job cannot be sustained for longer periods of “probation”.

Our estimations suggest that segregation is stronger in regions more densely populated by Roma people and shows that it is also true for identical levels of unemployment and identical numbers of public workers in the settlement. In a prosperous environment it hampers reintegration, while in a depressed environment it makes breadwinning more difficult for a minority whose primary interest would indeed be to cross the gateway “from the world of benefits to the world of work”.

## Appendix 2.10

**Table A2.10.1: Descriptive statistics of the estimation sample**

Variable	Mean	S.D.
The within-branch share of unskilled public workers (all unskilled workers=100)	81.6	25.4
The share of unskilled unemployed and inactive people in the settlement's unskilled population (aged 15-59, per cent)	58.2	12.3
Public works episodes started by unskilled public workers per thousand unskilled inhabitants in the settlement (head count)	293.3	979.9
Size of the site (number of workers)	58.3	147.9
Population of the settlement (thousand persons)	3.11	9.21
Percentage Roma (district-level, per cent)	16.7	11.5

Note: The calculation of logarithms is based on proportions instead of values expressed in per cent.