K5.1 Health care use following public works participation

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In this note, we study the effect of public works participation on the usage of public health care, which is an important issue for two main reasons. First, public works is the largest active labour market policy (ALMP) in Hungary, with over 300 thousand participants at its peak. Second, predicting the potential effect size and its sign is not straightforward. A wealth of previous studies have estimated a negative effect of (long-term) unemployment on health. While ALMPs might have positive effects on health, there is very scarce empirical literature on this issue. The public works programme is special from this perspective. First: it guarantees an income higher than the employment substitution subsidy,[1] thus financially enabling access to public health care. Second, participants need to perform work, which through regular activity and access to social relations can have a positive effect on mental health. Third, as the work performed is usually low skilled, and the public works income is lower than the minimum wage, some participants could consider participation as compulsion and hence participation could lead to consumption behaviour that is ultimately detrimental for health.

Disentangling the effect of public works is complicated by the fact that inflows to (and outflows from) the programme is not random. *Cseres-Gergely* (2014) showed that those living in small villages, those with low qualifications and the long-term unemployed have a much higher probability to participate. We can also hypothesize that the persons who remain in the public works programme have both lower observable and unobservable productivity in the primary labour market.

In this study we use the 'Admin3' database provided by the Databank of the Centre for Economic and Regional Studies;[2] thus we have access to detailed data on individuals' labour market histories and their use of public health care, enabling us to take into account a host of variables influencing public works participation.

In our analysis, we focus on those registered unemployed (inflows between 2012 and 2016) who were entitled to 90 days UI benefits, and lived in settlements with populations lower than 10 thousand persons. We only keep those who exhausted their UI benefits, and did not find work on the primary labour market within 15 days following benefit exhaustion.[3] Thus, on the one hand, we use a sample which is relatively homogeneous in terms of labour market history; but on the other hand, we focus on a small and atypical group of public works participants (only 15 percent of new public works spells started following UI benefit exhaustion). We consider those as public workers, who entered the programme within 3 months following benefit exhaustion. We compared them to those registered jobseekers who did not enter a public works programme in the 3-month window after their UI benefit ran out.

Finally, we used matching based on their observable characteristics to ensure comparability of the two groups.[4] In our analysis, we use two one-year periods: the year prior to inflow to UI benefits (which is typically the year before job-loss), and the year after the exhaustion of benefits, We examined five different outcomes: 1) the number of GP visits; 2) whether the individual had positive spending on medication; 3) whether the person had any spending in the public healthcare system (including in-

1 This is the main means-tested welfare benefit for the long-term unemployed in Hungary.

2 See the Appendix to the 'In Focus' section for a detailed description of the database.

3 These employees had a stable employment relationship, more precisely they worked at least 30 months out of the 36 months before applying for UI benefits.

4 We used the following variables when estimating the propensity score: gender, educational attainment, age, health care spending from the previous year, and micro-region fixed effects. In the matching procedure, we used one-to-one nearest neighbour matching (no replacement), within a given inflow semester.

and outpatient spending and medications); 4) the natural logarithm of spending on medications; and 5) the natural logarithm of total public healthcare spending. (The last two only contain observations with positive health care spending.)

In *Table K5.1.1* below, we present the results of regression analyses, where we include individual fixed effects. We show the coefficient estimates on two key variables: how the usage of the public health care changed between the year before job-loss and the year after the exhaustion of UI benefits in the control group; while the coefficient on public works participation shows how this differed for public works participants.[5]

Table K5.1.1: The use of public health care following entry into public works

	GP visits	Positive health spending	Positive medication spending	All medication spending (log)	All health care spending (log)
Public works entry	0.7239***	0.02863**	0.02839***	-0.02258	0.02530
	(0.1682)	(0.01144)	(0.009998)	(0.03410)	(0.09430)
After benefit exhaustion	-1.8287***	-0.06014***	-0.06206***	0.007596	-0.1530**
	(0.1197)	(0.008127)	(0.007313)	(0.02434)	(0.06667)
Number of observations	16,631	16,631	16,631	11,484	13,657
Number of individuals	8,316	8,316	8,316	6,882	7,703

Notes: Standard errors clustered at the levelof individuals are in brackets.
Significance levels: *** 1 percent, ** 5 percent, * 10 percent.
Source: Own calculations based on the Admin3 database.

Our results are similar for all outcomes. The use of public health care decreased following UI benefit exhaustion, and public works participation moderated this effect. For GP visits, this means that long-term unemployed decreased visits by almost 2 occasions (relative to when they were still employed), while this decrease was only 1 visit per year for public works participants. Similarly, the decrease in the probability of positive medication or overall medical spending is 3 percentage points higher among public works participants relative to the long-term unemployed. By contrast, among those with positive medication or medical spending, we found no differences across the two groups in the amount of spending.

In this short research project we could not disentangle (as we have no data proxying objective health status, such as biomarkers), whether the estimated differences were thanks to the positive income (or behavioural) effect of public works participation or rather due to a deterioration of public workers' health.

5 Thus, we used a difference-in-difference type estimation strategy.

References

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