

Online Appendix Material to Accompany
Do Temporary-Help Jobs Improve Labor Market Outcomes for Low-Skilled Workers?
Evidence from ‘Work First’
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We have interpreted the substantially different causal effects of temporary-help and direct-hire placements as reflecting differences in institutional arrangements between these employment venues. An alternative interpretation is that the difference in causal effects is due to the types of jobs available through these arrangements. In Detroit, as in the United States as a whole, temporary-help jobs are disproportionately likely to be in production positions. The U.S. Bureau of Labor Statistics reports that in 2005, 17.1 percent of temporary-help workers nationally were in production jobs versus only 7.1 percent of workers employed in traditional employment arrangements (U.S. BLS, 2005). In the manufacturing-intensive city of Detroit, this pattern is even more pronounced: 32 percent of temporary-help placements in our sample are in production jobs versus 6 percent of direct-hire placements. Though the vast majority of both temporary-help and direct-hire job placements are found in non-production positions, the substantial overrepresentation of production jobs among temporary-help placements raises an important question: is the difference in causal effects between temporary-help and direct-hire placements due in part to discrepancies between production and non-production jobs rather than temporary-help versus direct-hire arrangements per se?

To answer this question, we estimated an augmented version of equation (3) that uses four endogenous variables in place of the prior two: temporary-help production job, temporary-help non-production job, direct-hire production job, and direct-hire non-production job. These endogenous variables are instrumented as above using contractor-by-year dummies. Estimates of the augmented model summarized in Online Appendix Table A provide strong support for the supposition that it is the employment arrangement, rather than the type of job, that accounts for the discrepancy in causal effects between temporary-help and direct-hire placements. We estimate that direct-hire placements into production jobs raise quarterly earnings by \$885 whereas temporary-help placements into production jobs *reduce* quarterly earnings by \$589. Both point estimates are marginally significant, and highly significantly different from one another. We further find that direct-hire placements into non-production jobs raise quarterly

earnings by \$424 (highly significant) while temporary-help placements into non-production jobs have essentially no effect on quarterly earnings. Estimates for quarterly employment tell a similar story to those for earnings.

In net, direct-hire placements significantly raise subsequent employment and earnings, whether those placements are in production or non-production jobs. In contrast, temporary-help placements do not have positive effects on earnings and employment in the post-placement quarters, regardless of whether the placement is in a production or non-productions position. Notably, the data do not suggest that production jobs, which are heavily overrepresented in temporary help placements, are intrinsically lower-paying or less stable than non-production positions. Direct-hire production placements are estimated to yield the largest earnings and employment benefits of the four categories of placements, while temporary-help production placements are found to be least beneficial.

Appendix Table A Instrumental Variables Estimates of The Effect of Work First Job Placement into Temporary Help and Direct-Hire Production and Non-Production Jobs on Subsequent Earnings and Employment in Quarters 2–8 Following Work First Assignment

	A. Quarterly earnings	B. Quarterly employment
Direct-hire/production job	885~ (488)	0.21* (0.09)
Direct-hire/nonproduction job	424** (130)	0.13** (0.03)
Temp-help/production job	-589~ (327)	-0.13~ (0.08)
Temp-help/nonproduction job	-4 (244)	0.03 (0.06)
Constant	1002** (51)	0.42** (0.01)
R ²	0.24	0.18
H ₀ :Temp production = direct production	0.02	0.01
H ₀ :Temp nonproduction = direct nonproduction	0.10	0.10

N = 37,161. Robust standard errors in parentheses are clustered on Work First contractor (33 clusters). Each column corresponds to a separate 2SLS regression. Instrumental variables for jobs obtained (direct-hire/temporary-help by production/non-production) are contractor by year of assignment dummies. Significance at the 0.01, 0.05, or 0.10 level is indicated by **, *, and ~, respectively. Sample and specification are otherwise identical to prior tables.

Appendix Table B OLS and Instrumental Variables Estimates of the Effect of Work First Job Placements on Employment by Sector over Quarters 2–8 Following Work First Assignment: Direct-Hire and Temporary Help Jobs

	All employment		Direct-hire employment		Temporary-help employment	
	Qtrs 2–4 (1)	Qtrs 5–8 (2)	Qtrs 2–4 (3)	Qtrs 5–8 (4)	Qtrs 2–4 (5)	Qtrs 5–8 (6)
<u>A. OLS</u>						
Direct-hire job placement	0.18** (0.01)	0.11** (0.00)	0.18** (0.01)	0.11** (0.00)	-0.01** (0.00)	-0.00 (0.00)
Temp-help job placement	0.16** (0.01)	0.10** (0.01)	0.05** (0.01)	0.05** (0.01)	0.12** (0.01)	0.04** (0.00)
Constant	0.40 (0.00)	0.41 (0.00)	0.32 (0.00)	0.34 (0.00)	0.07 (0.00)	0.06 (0.00)
R ²	0.17	0.15	0.15	0.12	0.07	0.03
H ₀ : Temp = direct	0.20	0.02	0.00	0.00	0.00	0.00
<u>B. 2SLS</u>						
Direct-hire job placement	0.20** (0.04)	0.11** (0.04)	0.19** (0.03)	0.10** (0.04)	0.01 (0.02)	-0.01 (0.01)
Temp-help job placement	-0.01 (0.03)	-0.05 (0.04)	-0.08** (0.02)	0.00 (0.04)	0.07** (0.02)	-0.02 (0.01)
Constant	0.41 (0.01)	0.42 (0.01)	0.33 (0.01)	0.35 (0.01)	0.07 (0.01)	0.07 (0.00)
R ²	0.16	0.14	0.14	0.12	0.06	0.02
H ₀ : Temp = direct	0.00	0.01	0.00	0.16	0.02	0.52

N = 37,161. Robust standard errors in parentheses are clustered on Work First contractor (33 clusters). See notes to Table 6.