ONLINE APPENDIX FOR

THE EFFECTS OF YOUTH EMPLOYMENT: EVIDENCE FROM NEW YORK CITY LOTTERIES

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Online Appendix 1: Other specifications

Robustness checks

Various robustness checks to the basic results on earnings in Table 3 yield extremely similar results. As we show in Appendix Table 5, all of the results are very similar to those in Table 3 when we perform the same specifications but additionally control for: gender, dummies for race categories, citizenship, age, number of family members, individual's wage income in Year -1, individual's NYC government wages in Year -1, individual's non-NYC government wages in Year -1, a dummy for whether the individual had any job in Year -1, a dummy for whether the individual had a non-NYC government job in Year -1, a dummy for whether the individual was enrolled in college in Year -1, a dummy for whether the individual was claimed on a return in Year -1, and family income in Year -1 if the individual was claimed on a return in Year -1.[i]

Appendix Table 6 shows a number of other specifications, all of which deliver results very similar to the baseline specification. First, in Panel A, we use the dummy for winning the *initial* SYEP lottery as the instrument, rather than our baseline where the instrument is a dummy for winning any of the SYEP lotteries in Year 0.[ii] Second, in Panel B, we only include individuals in the sample who match the SYEP data according to their SSN. Third, in Panel C, we cluster at the individual level rather than at the level of the provider, which leads to extremely similar standard errors and significance levels.

Dynamics

As shown in Table 2, SYEP participation in Year 0 slightly affects the probability of SYEP participation in future years (i.e. Years 1-4). Thus, some of the effects on earnings we observe are mediated through the impact of SYEP on future SYEP participation, though the small effect on future participation suggests a limited role for such a mechanism. To more precisely examine the extent to which this drives the results, we estimate the effect of SYEP participation on earnings using the "dynamic" specification of Cellini, Ferreira, and Rothstein (2010). In our context, this dynamic estimator effectively yields the effect of SYEP participation in Year 0 on earnings in any subsequent year, while removing the effect that operates through the channel of the effect of Year 0 SYEP participation on subsequent SYEP participation. By contrast, the instrumental variables estimates in Table 3, which we call the "static" estimates, estimate the effect of being employed through SYEP in Year 0 on the future path of earnings and employment, including the effect that works through future SYEP participation.

Following the "recursive" procedure of Cellini et al. (2010), we first estimate the coefficients in Tables 2 and 3, showing the effect of Year 0 SYEP participation on subsequent earnings and on subsequent SYEP participation respectively, using the methods discussed above. Let β_τ^S represent the estimate of the effect of SYEP

[i] Controlling for higher-order terms in income also has negligible affects on the results.
[ii] Unsurprisingly, these regressions have somewhat larger standard errors, but the estimates are still very significant and have small confidence intervals.

participation in Year 0 on earnings (or another outcome variable) in year τ from Table 3, and let π_t represent the effect of Year 0 SYEP participation on the probability of SYEP participation in year *t* (from Table 2). We calculate the dynamic effect β_τ^D in year τ as:

$$\beta_\tau^D = \beta_\tau^S - \sum_{t=1}^{\tau} \pi_t \beta_{\tau-t}^D \qquad (3)$$

We solve for the dynamic effects in each year using the recursive equation (3). Standard errors are obtained by the delta method. By contrast, the instrumental variables estimates in Table 3, which we call the "static" estimates and which represent β_τ^S in (3), estimate the effect of being employed through SYEP in Year 0 on the future path of earnings and employment. These two objects of study reflect different conceptual experiments, both of which are of interest.

Since Table 2 shows that SYEP participation in Year 0 has a small impact on the probability of future SYEP participation, it is not surprising that the dynamic estimator finds results that are similar to the static estimates. Appendix Table 7 shows that the effect on subsequent total earnings is somewhat more negative in the dynamic specification than in the static specification, particularly in the initial years. Nonetheless, it is worth noting that the estimated effect on non-NYC government earnings and on total earnings is generally similar to the estimated effect in the static specification in Table 3.

The small positive effect of SYEP participation on NYC government earnings in Years 1-4 in the dynamic specification indicates that average total wages conditional on SYEP employment in subsequent years must be increasing slightly over time, likely because of the rise in the minimum wage over time (and possibly because average hours worked in SYEP could have changed).

In our other analysis throughout the paper, we use the simpler static specification, though we note that throughout all of our specifications and outcomes we obtain comparable results in the dynamic version to those in the static analysis (which is unsurprising since the effect of Year 0 SYEP participation on subsequent SYEP participation is quite modest).

Appendix Table 8 shows specifications relating to the number of times the individual participated, or could have participated, in SYEP. Among applicants who were too young to have been eligible to participate in SYEP previously because they were 14 or younger in 2005 (115,242 applicants), the results are similar to our main sample. While we only have records from SYEP on lottery applications and SYEP participation starting in 2005, we can use IRS records on NYC government earnings in prior years as a proxy for prior SYEP participation (classifying individuals as having participated in SYEP in a given prior year when they had positive NYC government earnings in that year). Under this definition, we show the effect of SYEP participation separately for those who had previously participated in SYEP no times or one time. This is relevant because our empirical specification assumes that the effect of moving from zero times participating in SYEP to one time participating in SYEP is the same as the effect of moving from one time participating to two times, and so on. The effects in these groups are statistically

indistinguishable. We also use winning the SYEP lottery as an instrument for the total number of times participating in SYEP between 1999 and Year 0 (inclusive) and show that this also yields comparable results.

Online Appendix 2: Discussion of Mechanisms

It is worth considering why SYEP participation reduced mean earnings for three years after participation in the program. In this Appendix, we consider a number of additional potential explanations, including: replacing work experience, job type, effects on job transitions, income effects, substitutability of leisure across years, and signaling.

Replacing valuable work experience

As noted in the main text, it is possible that SYEP harms individuals' future earnings because it affects the experiences that they gain in Year 0. If SYEP has a negative effect on subsequent earnings in part because it crowds out other, valuable employment experiences in Year 0, then we would expect that groups with more Year 0 crowdout would also show more negative effects of SYEP on subsequent earnings. This is borne out in the data.

The groups for which the effect on total earnings in Year 0 is smallest are the groups for which the effect on non-NYC government earnings in Year 0 is particularly negative (i.e. groups for which the crowdout due to participating in SYEP is particularly large). In these groups, the effect on earnings in Years 1-4 also tends to be particularly negative, consistent with the hypothesis that such crowdout plays a role in explaining the negative effect of SYEP on subsequent earnings.[iii]

This pattern holds true for all the groups we analyze. First, the effect of SYEP participation on total earnings in Year 0 is highest in the 50th percentile, intermediate in the 75th percentile, and smallest in the 90th percentile. The effects on subsequent earnings are ordered the same way: the effect on earnings in Years 1-4 is sometimes positive in the 50th percentile, negative in the 75th percentile, and most negative in the 90th percentile. Similarly, the point estimate of the effect of SYEP participation on non-NYC government earnings in Year 0 among whites is particularly negative (-$296), is intermediate among Latinos ($-251), and is least negative among blacks and others (-$175 and -$190). This correlates with the effects on subsequent earnings estimated in each group, which is most negative for whites, intermediate for Latinos, and least negative for blacks and others. Likewise, the effect on non-NYC government earnings in Year 0 is more negative among the older SYEP applicants (-$381) than among the younger applicants (-$66), and there is a larger negative effect on subsequent earnings in the older group. Moreover, the effect on non-NYC government earnings in Year 0 is much more negative for those who worked prior to SYEP (-$399) than that among those who did not work prior to SYEP (-

[iii] Nonetheless, as noted in the main text, we emphasize that each of these samples tends to differ on average along many characteristics (that are correlated across samples), and it could be that the effect on non-NYC government earnings in Year 0 is correlated across groups with the effect on subsequent total earnings for reasons unrelated to the hypothesis described above.

$117), and those who worked prior to SYEP showed the more negative effect on subsequent earnings. Finally, the Year 0 point estimate on non-NYC government earnings is much more negative in the 2007-8 lotteries than in the 2005-6 lotteries, and the effect of SYEP on future earnings is much more negative in the 2007-8 lotteries. It is also noteworthy that more negative subsequent impacts on earnings tend to occur in groups that are more likely to otherwise have a job in Year 0, like the older group or those who had a job in the prior year.

Effects of type of job

We investigate whether the type of SYEP job individuals are placed in has implications for their earnings. In Appendix Table 12, we show the following OLS regressions:

$$E_{ij} = \beta_0+\beta_1(W_{ij}*P_j)+\beta_2 W_{ij}+X_j\beta+v_{ij} \quad (4)$$

where E_{ij} represents the earnings of individual i in lottery j, W_{ij} is a dummy for winning the SYEP lottery, P_j is the percent of a provider's jobs that are in Cluster 1 (in a given lottery j), and X_j reflect dummies for each provider-lottery combination.[iv] Thus, the coefficient β_1 on the interaction term reflects whether individuals who win the lottery at providers with a greater proportion of Cluster 1 jobs have lower or higher earnings than those who win the lottery in providers with a smaller proportion of Cluster 1 jobs.[v] (If an individual applies to a provider with a greater proportion of Cluster 1 jobs, then winning the lottery is more likely to place the individual in a Cluster 1 job.)

The results in Panel A of Appendix Table 12 show that being in a Cluster 1 job negatively impacts subsequent total earnings (significantly in Year 3 and Year 4, as shown in Column 1), and that this is driven by negative effects on earnings in Cluster 2 (as shown in Column 3). Thus, the regressions demonstrate that placing people in jobs in SYEP-type industries (i.e. Cluster 1 industries) has a substantial negative impact on earnings in other industries, while having no significant impact on earnings in SYEP-type industries. This is evidence that SYEP affects future earnings in part because it affects the type of job that individuals take in future years.

In Panel B of Appendix Table 12, we investigate the coefficient on the main effect of winning the SYEP lottery. This coefficient reflects the hypothetical impact of winning the SYEP lottery *in a provider that only places individuals into Industry Cluster 2*. Intriguingly, the effect on total earnings is positive and significant in many cases (specifically in Year 0, Year 3, Year 4, Years 0-4, and Years 1-4), and it is positive and insignificant in the remaining cases. The point estimates are substantial (several hundred dollars in the case of individual years, and several times larger in the case of Years 0-4 or Years 1-4 combined). If SYEP has a positive effect on earnings when individuals are in

[iv] The IV version of this regression — using W_{ij} and $W_{ij}*P_j$ as instruments for SYEP participation and SYEP participation in provider P_j — shows directionally similar results with less statistical power.

[v] We also explored regressions in which we interacted winning the lottery with the percent of jobs at the provider that were private not-for-profit, private for-profit, or government jobs. We found no significant differences in the effects of SYEP across these groups.

Industry Cluster 2, then SYEP could improve outcomes of its lottery winners by increasing the fraction of SYEP jobs that are in Industry Cluster 2.[vi]

Nonetheless, we reiterate the important caveat that heterogeneity in the effects across providers could be driven by factors that happen to be correlated with the types of jobs in each provider. In this case, these results could not be interpreted as the causal effects on earnings of Cluster 1 vs. Cluster 2 jobs.

The effect of SYEP on subsequent job industry does not account for the effect of SYEP on subsequent earnings: when we estimate the effect of SYEP on the probability of working in each two-digit industry and calculate the mechanical effect of this industry pattern on earnings (using mean earnings in each industry and year among the control group), this accounts for an insignificant fraction of SYEP's effect on future earnings.

Effects on employment transitions

It is also possible that SYEP harms individuals' career development by increasing employment transitions and interrupting experience with past employers.[vii] Youth could take the SYEP job rather than continuing with an existing employment relationship. For example, a youth who had worked at a summer job in the previous summer might choose not to return to the same employer if a SYEP job were available. Appendix Table 11 shows that SYEP has such an effect in Year 0 (among those who did not participate in SYEP in Year -1), though this effect is small. In Year 1, the estimate is also negative but barely significant, and in subsequent years the estimates turn insignificant.

Employment transitions are associated with lower earnings in a cross-section of individuals, and when we use the size of this cross-sectional association, we find that the effect of SYEP on job transitions can account for 38 percent of the impact of SYEP on earnings in Years 1 to 4. However, we emphasize that the cross-sectional association between job transitions and earnings is not causal and is therefore subject to omitted variable bias. We also note that like other channels explored in this appendix, this channel is not mutually exclusive with others we have explored.[viii]

Income effects or substitutability of leisure

One potential explanation for the decrease in subsequent earnings relates to income effects. Getting a SYEP job leads to an average increase in earnings of $872 in the year of the SYEP job, which could in principle lead to increased leisure in subsequent years if leisure is a normal good. However, income effects cannot immediately explain the

[vi] We also note the caveat that when we control for all other available demographics interacted individually with W_{ij} (which adds many controls and should therefore reduce the efficiency of the estimates), the coefficients β_1 and β_2 above are reduced in significance and substantially reduced in magnitude, although we robustly estimate that β_1 is negative and substantial and that β_2 is positive and substantial.

[vii] Card and Hyslop (2005) examine a related issue when investigating the dynamic effects of the Self Sufficiency Project in Canada.

[viii] If this were the primary explanation for negative effects on future earnings, we also would not immediately expect the variation across provider industries that we find.

striking heterogeneity across groups that we find; for example, we would have to postulate that there is an income effect on the earnings of those who previously had a job, but not on the earnings of those who previously did not have a job. While it is possible that the income effects are heterogeneous in ways that track the heterogeneous findings across groups, this is an *ad hoc* — and not particularly parsimonious — explanation. Moreover, recall that SYEP leads individuals to earn less conditional on having a job. Consequently, such an income effect would have to operate in a manner that seems unexpected: it would have to decrease earnings even as it leads individuals to be equally or more likely to take a job.

Moreover, as we discuss in further detail below, one of our robust findings is that individuals in groups that experienced larger increases in total earnings in Year 0 also experienced smaller earnings decreases in subsequent years. If an income effect were responsible for the results and were homogeneous across groups, we might have expected the opposite (assuming that leisure is a normal good). Note, however, that it is possible that in Year 0, the increase in income due to SYEP caused a decrease in non-SYEP earnings in Year 0 *subsequent* to SYEP participation (i.e. in the fall of Year 0).

In principle, another explanation for the results is that leisure could be substitutable across years, so that a decrease in leisure in Year 0 would have been associated with an increase in leisure in Year 1. However, this explanation runs into the same set of difficulties as the income effect explanation just explored. Again, leisure substitutability cannot immediately explain the striking heterogeneity across groups that we find; such an explanation would be *ad hoc*. Again, such leisure substitutability would not be consistent with the finding that the groups with larger increases in Year 0 total earnings tended to be those with smaller subsequent decreases in total earnings. And again, such leisure substitutability would be operating in a way that seems unexpected: it would have to decrease earnings even as it leads individuals to be more likely to take on a job. Again, a more satisfying hypothesis could explain both the effect of SYEP on the probability of having a job and the effect of SYEP on subsequent earnings.

Signaling

Another possible explanation is that employers use the information that an individual participated in SYEP in deciding whether to hire them. While winning the SYEP lottery is random conditional on applying, SYEP participation still contains information that employers could use. Those who apply for and enroll in SYEP may be those who have difficulty securing employment elsewhere. Thus, SYEP participants may be negatively selected relative to the population as a whole.[ix] Employers may therefore take the fact that an individual participated in SYEP as a negative signal of their productivity (in contrast to receiving a positive signal from the employment of an otherwise

[ix] Indeed, our data show that (unconditional on SYEP application) prior family income of SYEP participants is substantially lower than that of those who were eligible on the basis of being NYC residents but did not participate in SYEP.

inexperienced worker, as in Pallais 2014).[x] This would be consistent with some of the patterns across groups: groups with lower income on average (like blacks or younger individuals) tend to have negative effects on subsequent earnings that are smaller in absolute value, which we might expect if SYEP participation is interpreted less negatively in more disadvantaged groups (because more disadvantaged groups are less likely to have alternative options).

However, the signaling explanation is not immediately consistent with the difference in effects before and during the Great Recession. The point estimates of the effects on Years 1-4 earnings in the lotteries during the Great Recession (2007 and 2008) are more negative than those in the lotteries prior to the Great Recession (2005 and 2006). If employers were updating their expectation of individuals' productivity on the basis of SYEP participation, one might expect that employers would interpret SYEP participation more negatively when the individual participated before the Great Recession, than when the individual participated during the Great Recession (since it was more difficult to find other employment during the Great Recession). At the same time, the estimates in 2005-2006 are insignificantly different from those in 2007-8, though barely so. Thus, while our evidence is not directly inconsistent with the signaling hypothesis, it also does not fully support the signaling hypothesis either.

Other potential explanations

It is also worth mentioning a number of other possible explanations for the results. First, it is possible that SYEP caused the labor supply curve to shift to the right: SYEP could lead individuals to be more willing to accept low-paying jobs of the sort SYEP offers. If the demand curve shifted to the left, we would expect a decrease in earnings and a decrease in hours worked. If the supply curve shifted to the right, we would expect an increase in hours worked and could observe a decrease or increase in earnings. Table 3 shows that total jobs increase in Year 1, although some of this increase is due to an increase in SYEP jobs, which do not reflect labor demand. The dynamic estimates effectively remove the influence of SYEP jobs and show that total jobs decrease in Year 1. While we lack a measure of hours worked for the full sample, employment may be a reasonable proxy for hours worked given the absence of other proxies.

Second, SYEP participants could be exposed to a peer group that has negative effects on their future earnings. We find no evidence for such a channel: when we interact winning the lottery with measures of peer group characteristics (including family income, gender, race, or age), the interactions are generally insignificant.

[x] SYEP has negative earnings effect for those who had previous employment, but no significant negative earnings effect for those who did not have previous employment. SYEP enrollment could be interpreted more negatively if an individual was previously employed than if the individual was not, for example because it indicates that the individual was unable to secure re-employment with the previous employer.

Appendix Tables (to be placed online)

Appendix Table 1: *Industry breakdown*

SYEP-Reported Job Type	Percent of sample	Imputed NAICS	Cluster
Arts and recreation	10.81	71	1
Camp (out of city)	10.59	72	1
Community/social service	11.06	62	1
Cultural institution	1.24	71	2
Day care/day camp	36.99	71	1
Educational services	7.68	61	1
Financial services	0.21	52	2
Government agency	7.02	92	1
Healthcare/medical	7.74	62	1
Hospitality/tourism	0.09	71	1
Legal services	0.20	54	2
Other	3.80	99	2
Real estate/property	1.14	53	2
Retail	1.24	44	2
Science and technology	0.19	54	2

Notes: The table shows the percentage of SYEP participants in each industry, as classified by SYEP administrative records. The "Cluster" column shows whether we classify a SYEP-reported industry designation into North American Industrial Classification System (NAICS) codes 61, 62, 71, and 92 (comprising Cluster 1), or into other NAICS codes (comprising Cluster 2). Cluster 1 consists of industries that are overrepresented in SYEP jobs relative to the control group's industry distribution.

Appendix Table 2: *Comparison of Compliers to Never-Takers*

(1) Dependent variable	(2) Difference between compliers and never-takers
A) Total earnings in Year -1	-257.69 (41.67)***
B) Job in Year -1	0.013 (0.0084)
C) College in Year -1	-0.026 (0.0023)***
D) Male	0.0052 (0.0058)
E) White	-0.0028 (0.0042)
F) Black	0.046 (0.0073)***
G) Latino	-0.026 (0.0049)
H) Other race	-0.017 (0.0040)
I) Age	-0.43 (0.019)***
J) U.S. citizen dummy	0.024 (0.0026)***

Notes: We present estimates that reflect the difference between compliers and never-takers in values of demographic characteristics. To construct this value for each demographic variable, we separately estimate the difference of that variable between: (1) those that were allowed and took up treatment *vs.* those that were allowed but did not take up treatment (*i.e.* never takers) and (2) those that were not allowed but took up treatment (*i.e.* always takers) *vs.* the never takers. The characteristics of those that were allowed and took up treatment are a weighted average of the always takers and the compliers. Using the proportion of this group that are always takers (calculated by dividing the proportion taking up treatment when not allowed treatment by the proportion taking up treatment when allowed treatment) and the average difference between this group and the never takers and the average difference between the always takers and the never takers as described above, we then solve for the complier characteristics and estimate them using the delta method. "Job in Year -1" refers to a dummy for having positive earnings in Year -1. Age is expressed in years. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level. See additional notes to Table I.

Appendix Table 3: *"Reduced form" effect of winning SYEP lottery on employment outcomes*

	(1) Total Earnings	(2) NYC gov't earnings	(3) Non-NYC gov't earnings	(4) Job dummy	(5) Non-NYC gov't job dummy
A) Year 0	639.43	792.37	-152.78	0.52	-0.035
	(22.33)***	(12.80)***	(17.82)***	(0.0097)***	(0.0026)***
B) Year 1	-73.11	33.51	-106.62	0.0090	-0.013
	(29.27)**	(3.79)***	(29.20)***	(0.0025)***	(0.0019)***
C) Year 2	-68.66	16.97	-85.63	0.0033	-0.0071
	(30.78)**	(2.52)***	(31.03)***	(0.0023)	(0.0020)***
D) Year 3	-81.04	5.98	-87.03	-0.00044	-0.0037
	(32.43)**	(1.55)***	(32.30)***	(0.0017)	(0.0017)**
E) Year 4	-25.84	3.25	-29.09	0.00096	-0.00025
	(32.91)	(1.17)***	(33.21)	(0.0016)	(0.0016)
F) Years 0-4	390.79	852.08	-461.14	0.065	-0.0043
	(129.11)***	(16.82)***	(126.35)***	(0.0025)***	(0.0016)***
G) Years 1-4	-248.64	59.71	-308.36	0.0073	-0.0020
	(112.88)**	(7.22)***	(113.05)***	(0.0016)***	(0.0016)

Notes: The table shows the "intent-to-treat" estimates: coefficients and standard errors on the treatment dummy from OLS regressions of earnings and employment outcomes on a dummy for winning the SYEP lottery. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level. See other notes to Table 3.

Appendix Table 4: *Effect of SYEP participation on earnings and employment outcomes in Years 5 to 7*

	(1) Total Earnings	(2) NYC gov't earnings	(3) Non-NYC gov't earnings	(4) Job dummy	(5) Non-NYC gov't job dummy	Number of obs.	Number of individuals
Panel A: Without controls							
A) Year 5	8.96	0.84	8.12	0.0014	-0.00039	200,306	147,513
	(52.06)	(1.18)	(52.03)	(0.0024)	(0.0024)		
B) Year 6	-76.03	-0.23	-75.81	-0.0021	-0.00080	115,805	94,529
	(105.35)	(1.48)	(105.50)	(0.0033)	(0.0033)		
C) Year 7	268.08	-1.70	269.78	-0.0037	-0.0029	56,379	56,379
	(137.72)*	(1.97)	(137.92)*	(0.0051)	(0.0050)		
Panel B: With controls							
D) Year 5	-5.11	0.91	-6.03	0.00083	-0.0010	200,306	147,512
	(46.20)	(1.23)	(46.36)	(0.0025)	(0.0026)		
E) Year 6	-71.19	-0.25	-70.94	-0.0026	-0.0012	115,805	94,529
	(95.45)	(1.48)	(95.63)	(0.0033)	(0.0034)		
F) Year 7	163.15	-1.64	164.79	-0.0046	-0.0038	56,379	56,379
	(129.26)	(1.96)	(129.42)	(0.0052)	(0.0050)		

Notes: The table shows coefficients and standard errors on the treatment dummy from IV regressions of earnings and employment outcomes on SYEP participation, controlling for covariates. The instrument for whether an individual participated in SYEP is a dummy indicating that an individual won the SYEP lottery. The controls added in Panel B are: gender, dummies for race categories, citizenship, age, number of family members, individual's wage income in Year -1, individual's NYC government wages in Year -1, individual's non-NYC government wages in Year -1, number of jobs in Year -1, a dummy for whether the individual had any job in Year -1, a dummy for whether the individual was enrolled in college in Year -1, a dummy for whether the individual was claimed on a return in Year -1, and family income in Year -1 if the individual was claimed. See other notes to Table 3. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 5: *Effect of SYEP participation on earnings and employment outcomes with controls*

	(1) Total Earnings	(2) NYC gov't earnings	(3) Non-NYC gov't earnings	(4) Job dummy	(5) Non-NYC gov't job dummy
A) Year 0	903.39	1085.29	-181.68	0.71	-0.047
	(16.26)***	(10.11)***	(12.90)***	(0.0065)***	(0.0032)***
B) Year 1	-75.28	46.06	-121.34	0.013	-0.017
	(23.52)***	(4.90)***	(24.09)***	(0.0033)***	(0.0027)***
C) Year 2	-72.44	23.34	-95.77	0.0044	-0.0097
	(28.25)***	(3.34)***	(29.02)***	(0.0029)	(0.0024)***
D) Year 3	-93.06	8.21	-101.29	-0.00087	-0.0054
	(31.57)***	(2.13)***	(31.43)***	(0.0021)	(0.0022)**
E) Year 4	-22.98	4.45	-27.42	0.00091	-0.00075
	(36.75)	(1.57)***	(37.12)	(0.0022)	(0.0021)
F) Years 0-4	639.63	1167.35	-527.50	0.088	-0.0061
	(100.72)***	(14.83)***	(100.36)***	(0.0033)***	(0.0021)***
G) Years 1-4	-263.76	82.05	-345.82	0.0098	-0.0030
	(97.64)***	(9.38)***	(99.03)***	(0.0021)***	(0.0021)

Notes: The table shows coefficients and standard errors on the treatment dummy from IV regressions of earnings and employment outcomes on SYEP participation, controlling for covariates. The instrument for whether an individual participated in SYEP is a dummy indicating whether an individual won the SYEP lottery. The table is based on the specification as Table 3 in the main text, except that we control for the covariates listed in Appendix Table 4. Controlling for any subset of these covariates yields extremely similar results. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 6: *Effect of SYEP participation on earnings and employment outcomes, robustness tests*

	(1) Total Earnings	(2) NYC gov't earnings	(3) Non-NYC gov't earnings	(4) Job dummy	(5) Non-NYC gov't job dummy
Panel A. Initial lottery					
A) Year	867.68	1116.32	-248.51	0.70	-0.057
0	(37.61)***	(9.28)***	(37.85)***	(0.0065)***	(0.0040)***
B) Years	-451.28	81.40	-532.69	0.011	-0.00058
1-4	(170.98)***	(12.33)***	(169.50)***	(0.0024)***	(0.0025)
Panel B. Match only on SSN					
C) Year	876.60	1085.63	-208.82	0.71	-0.048
0	(25.18)***	(10.15)***	(24.89)***	(0.0063)***	(0.0035)***
D) Years	-337.71	81.74	-419.47	0.010	-0.0026
1-4	(155.62)**	(9.53)***	(156.00)***	(0.0021)***	(0.0021)
Panel C. Cluster by individual					
E) Year	875.89	1085.38	-209.27	0.71	-0.048
0	(26.61)***	(1.44)***	(26.69)***	(0.0021)***	(0.0024)***
F) Years	-340.59	81.80	-422.39	.010	-0.0027
1-4	(142.93)**	(5.31)***	(143.54)***	(0.0017)***	(0.0021)

Notes: The table shows coefficients and standard errors on the SYEP participation dummy from IV regressions of employment outcomes on SYEP participation. In Panel A, the instrument for whether an individual participated in SYEP is a dummy indicating that an individual won the *initial* SYEP lottery. In Panel B, the regressions are identical to those in the baseline specification in Table 3, except that we include people only if their SSN matches between the SYEP and IRS data. The sample size in Panel B is 293,428. In Panel C, we cluster the standard errors at the level of the individual. In all of these cases, the results are similar to the main results in Table 3. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 7. *Effect of SYEP participation on earnings and employment outcomes, dynamic specification*

	(1) Total Earnings	(2) NYC gov't earnings	(3) Non-NYC gov't earnings	(4) Job dummy	(5) Non-NYC gov't job dummy
A) Year 0	875.89	1085.38	-209.27	0.71	-0.048
	(25.30)***	(10.22)***	(25.05)***	(0.0064)***	(0.0036)***
B) Year 1	-126.86	12.78	-139.66	-0.009	-0.016
	(39.87)***	(2.29)***	(39.74)***	(0.0027)***	(0.0025)***
C) Year 2	-104.77	9.96	-114.73	-0.0041	-0.091
	(42.47)**	(2.08)***	(42.51)***	(0.0028)	(0.0027)***
D) Year 3	-110.80	4.18	-115.00	-0.0029	-0.0047
	(43.67)**	(1.39)***	(43.56)***	(0.0022)	(0.0029)**
E) Year 4	-32.21	2.50	-34.71	0.00033	-0.000024
	(43.84)	(1.32)*	(44.21)	(0.0021)	(0.0021)
F) Years 0-4	501.25	1114.81	-613.37	--	--
	(171.06)***	(11.55)***	(171.35)***		
G) Years 1-4	-374.64	29.43	-404.10	--	--
	(152.34)**	(4.53)***	(152.42)***		

Notes: This table employs the dynamic IV estimator of Cellini, Ferreira, and Rothstein (2010), as described in the text. The table shows coefficients and standard errors on the SYEP participation dummy from IV regressions of employment outcomes on SYEP participation. The instrument for whether an individual participated in SYEP is a dummy indicating that an individual won the SYEP lottery. We perform the dynamic estimate of the effect on earnings in Years 0-4 (or 1-4) by summing the coefficients estimated in the dynamic specification from Years 0 to 4 (or 1-4, respectively). "--" indicates that we do not perform the estimates from Years 0-4 and 1-4 for the probability of having a job; we cannot add these coefficients across Rows A through E (as in the case of the earnings estimates) because the probabilities are not independent. See other notes to Table 3. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 8. *Effect of SYEP participation on earnings outcomes by SYEP participation history*

	(1) Rule out prior SYEP participation (SYEP data)	(2) No prior SYEP participation (IRS data)	(3) Prev. participated once (IRS data)	(4) IV for number of times participated	(5) Total earnings of other family members
A) Year 0	960.35	899.17	883.40	948.13	-34.13
	(44.96)***	(36.42)***	(36.11)***	(27.83)***	(187.04)
B) Year 1	-69.83	-75.88	-165.22	-103.85	39.65
	(53.08)	(54.84)	(54.94)***	(41.56)**	(180.03)
C) Year 2	-123.36	-95.30	-104.47	-95.50	7.52
	(59.20)**	(55.22)*	(75.66)	(42.76)**	(175.87)
D) Year 3	-134.76	-109.84	-101.88	-111.96	-4.19
	(62.07)**	(54.37)**	(120.71)	(44.89)**	(175.04)
E) Year 4	-96.12	-24.57	-56.17	-35.54	-25.80
	(61.34)	(54.90)	(137.81)	(44.97)	(182.47)
N	115,248	202,456	60,295	294,100	261,304

Notes: The table shows coefficients and standard errors on the SYEP participation dummy from IV regressions of earnings outcomes on SYEP participation. The instrument for whether an individual participated in SYEP is a dummy indicating that an individual won the SYEP lottery. Column 1 shows results for applicants who were young enough that they never could have been eligible to participate in SYEP previously, because they were 14 or younger in 2005. In Columns 2 and 3, we use IRS records on NYC government earnings in prior years as a proxy for prior SYEP participation (classifying individuals as having participated in SYEP in a given prior year 1999 or after when they had positive NYC government earnings in that year). We show results for those who had previously participated no times or one time in Columns 2 and 3, respectively. For those participating two or more times, the sample sizes are much smaller, and the results are insignificant and uninformative. In Column 4, we use winning the SYEP lottery as an instrument for the total number of times participating in SYEP between 1999 and Year 0 (inclusive). In Column 5, we examine the effect on the total earnings of other family members. See other notes to Table 3. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 9. *Effect of SYEP participation on earnings outcomes by quantile*

	(1) Year 0	(2) Year 1	(3) Year 2	(4) Year 3	(5) Year 4
Panel A: Median regressions					
A) Total	1100.08	83.16	24.88	-38.34	-40.08
	(2.26)***	(18.66)***	(14.32)*	(17.20)**	(24.60)
B) NYC gov't	1077.49	--	--	--	--
	(2.15)***				
C) Non-NYC gov't	--	--	-55.66	-46.56	-43.43
			(9.50)***	(23.17)**	(32.70)
Panel B: Regressions for 75th percentile					
D) Total	479.70	-134.53	-121.13	-139.55	7.14
	(4.35)***	(27.36)***	(40.82)***	(53.26)***	(40.38)
E) NYC gov't	1181.22	--	--	--	--
	(2.29)***				
F) Non-NYC gov't	-147.29	-177.53	-154.03	-132.00	6.02
	(13.65)***	(28.72)***	(43.02)***	(43.84)***	(68.99)
Panel C: Regressions for 90th percentile					
G) Total	90.43	-256.71	-221.92	-211.77	-10.99
	(37.19)**	(64.16)***	(63.17)***	(93.21)**	(96.04)
H) NYC gov't	1100.68	16.08	71.11	--	--
	(6.69)***	(1.49)***	(9.13)***		
I) Non-NYC gov't	-572.33	-288.56	-205.65	-231.39	-28.89
	(38.36)***	(60.91)***	(73.73)***	(86.99)***	(224.74)
Panel D: Descriptive statistics					
J) Percent earning 0	39.93	44.17	38.80	33.27	28.85
K) Median total	935.96	625.63	1,049.07	1,382.53	2,469.72
L) 75th total	1,353.58	2,002.40	3,940.73	6,189.34	8,671.08
M) 90th total	2,981.19	6,289.53	9,607.05	12,846.62	16,373.20

Notes: The table shows coefficients and standard errors on the SYEP participation dummy from quantile regressions of earnings outcomes on SYEP participation. The independent variable of interest is a dummy indicating that an individual won the SYEP lottery. Each row investigates a different quantile and/or outcome variable. Panel A investigates the effect of SYEP on median earnings; Panel B investigates the effect on the 75th percentile of earnings; and Panel C investigates the effect on the 90th percentile. Rows A, D, and G investigate the effect on total earnings; B, E, and H investigate the effect on NYC government earnings; and C, F, and I investigate the effect on non-NYC government earnings. For context, Panel D shows descriptive statistics. "--" indicates that the quantile of earnings in question is zero, which implies that SYEP participation has no effect on the quantile in question. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level. See other notes to Table 3.

Appendix Table 10a. *Effect of SYEP participation on Year 0 earnings outcomes among subsamples*

	(1) Total Earnings	(2) NYC gov't earnings	(3) Non-NYC gov't earnings	(4) *p*-value for Total Earnings	(5) N
A) WOTC-eligible	842.21 (63.01)***	1089.02 (11.46)***	-246.66 (62.90)***	0.58	32,175
B) WOTC-ineligible	878.68 (26.41)***	1085.00 (10.15)***	-206.10 (26.31)***		261,925
C) Below-median inc.	888.43 (27.56)***	1086.78 (13.06)***	-198.27 (22.31)***	0.68	147,050
D) Above-median inc.	859.72 (53.91)***	1084.04 (7.99)***	-223.96 (54.21)***		147,050
E) Males	855.91 (31.98)***	1079.57 (9.74)***	-223.55 (32.20)***	0.48	132,512
F) Females	891.66 (38.70)***	1090.22 (10.76)***	-198.26 (39.04)***		161,588
G) White	899.28 (70.66)***	1,195.37 (42.28)***	-296.09 (72.58)***	0.38	37,162
H) Black	899.62 (34.89)***	1,073.37 (5.88)***	-174.57 (33.69)***		142,468
I) Latino	803.85 (53.72)***	1,055.57 (8.59)***	-251.49 (52.00)***		78,947
J) Other races	944.33 (65.63)***	1,134.97 (34.05)***	-190.19 (57.07)***		35,523
K) Older	687.89 (41.56)***	1068.99 (12.69)***	-380.89 (38.86)***	0.00000	146,913
L) Younger	1033.34 (27.50)***	1099.53 (8.84)***	-65.97 (28.03)**		147,187
M) Work in Year -1	690.92 (80.33)***	1090.73 (15.00)***	-399.11 (82.92)***	0.0009	94,622
N) No work in Year -1	966.16 (12.40)***	1083.06 (9.07)***	-116.90 (8.82)***		199,478
O) 2005-6 lotteries	902.11 (34.52)***	1069.05 (11.07)***	-166.85 (35.25)***	0.40	115,805
P) 2007-8 lotteries	858.58 (36.17)***	1096.16 (10.62)***	-237.28 (35.07)***		178,295
Q) Emp. Zones	886.87 (34.35)***	1082.32 (10.50)***	-195.29 (34.21)***	0.68	149,137
R) Non-Emp. Zones	865.76 (37.00)***	1088.49 (10.90)***	-222.44 (36.51)***		144,963

Notes: The table shows coefficients and standard errors on the SYEP participation dummy from IV regressions of employment outcomes on SYEP participation. The instrument for whether an individual participated in SYEP is a dummy indicating that an individual won the SYEP lottery. Each row shows the results for a different population. "Work in Year -1" indicates that the individual had positive earned income in Year -1. Below-median income refers to individuals with family income in Year -1 of $26,313 and below, and above-median income refers to individuals in families with higher income (where the median income refers to the median in Year -1 in the sample we investigate). The Older category is at least age 16.25, whereas

the Younger category is below this age. The sample size is slightly different for above-median and below-median incomes, and for older and younger ages, because multiple individuals have the median value of income and age. Column 4 shows the *p*-value of the test of equality of the coefficients across the groups in question, when the dependent variable is total earnings in Year 0 (the tests of equality for non-NYC government earnings show similar results). See other notes to Table 3. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 10b. *Effect of SYEP participation on Years 1-4 earnings outcomes among subsamples*

	(1) Total Earnings	(2) NYC gov't earnings	(3) Non-NYC gov't earnings	(4) *p*-value for Total Earnings	(5) N
A) WOTC-eligible	-18.73 (429.52)	57.84 (18.65)***	-76.56 (429.80)	0.40	32,175
B) WOTC-ineligible	-385.49 (159.94)**	84.82 (9.90)***	-470.32 (160.56)***		261,925
C) Below-median inc.	-313.36 (148.82)**	74.66 (11.39)***	-388.02 (150.74)**	0.79	147,050
D) Above-median inc.	-389.23 (255.84)	88.81 (10.61)***	-478.07 (256.18)*		147,050
E) Males	-365.13 (162.55)**	92.11 (11.62)***	-457.26 (166.48)***	0.88	132,512
F) Females	-322.61 (243.76)	72.80 (10.46)***	-395.42 (244.65)		161,588
G) White	-1,242.35 (549.18)**	120.60 (20.56)***	-1,362.95 (554.96)**	0.27	37,162
H) Black	-122.54 (201.26)	72.17 (13.94)***	-194.69 (203.37)		142,468
I) Latino	-520.39 (329.04)	92.38 (10.71)***	-612.86 (327.02)*		78,947
J) Other races	-214.39 (296.80)	71.27 (15.16)***	-285.66 (300.66)		35,523
K) Older	-728.38 (250.09)***	74.19 (9.36)***	-802.56 (251.94)***	0.013	146,913
L) Younger	-43.79 (158.09)	88.22 (11.35)***	-132.03 (155.12)		147,187
M) Work in Year -1	-997.64 (419.66)**	56.51 (11.84)***	-1054.19 (422.71)**	0.020	94,622
N) No work in Year -1	6.20 (101.71)	92.37 (10.79)***	-86.17 (102.38)		199,478
O) 2005-6 lotteries	-64.14 (235.80)	77.03 (13.66)***	-144.20 (238.68)	0.13	115,805
P) 2007-8 lotteries	-523.10 (195.88)***	84.94 (9.82)***	-608.04 (196.48)***		178,295
Q) Emp. Zones	-299.06 (193.43)	80.52 (8.23)***	-379.63 (193.47)**	0.82	149,379
R) Not Emp. Zones	-364.29 (222.97)	82.96 (13.79)***	-447.23 (222.43)**		145,200

Notes: The table is identical to Table 10a above, except that the dependent variable in the regressions in 10b is earnings in Years 1-4. See other notes to Table 10a.

Appendix Table 11: *Effect of SYEP participation on job transitions*

	(1) Coefficient (standard error)	(2) Mean of dependent variable in control group
A) Year 0	-0.029 (0.0084)***	0.50
B) Year 1	-0.012 (0.0067)*	0.24
C) Year 2	-0.0038 (0.0054)	0.16
D) Year 3	-0.0034 (0.0040)	0.11
E) Year 4	0.0038 (0.0034)	0.08

Notes: The table shows coefficients and standard errors on a dummy for participating in SYEP, from a two-stage least squares regression. The instrument for participating in SYEP is whether an individual won the SYEP lottery. The dependent variable is the fraction of employers that an individual worked at in Year -1 that the individual still worked at in a given year. All regressions control for provider-year dummies. The second column shows the mean of the dependent variable. All regressions have 38,635 observations; the sample size is smaller than the main sample because the sample is limited to individuals who had a non-SYEP job in Year -1. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 12: *Effect of SYEP provider industry mix on earnings outcomes*

	(1) Total Earnings	(2) Total Earnings in Cluster 1	(3) Total Earnings in Cluster 2	(4) Total NYC gov't earnings	(5) Total non-NYC gov't earnings
Panel A: interaction term					
A) Year 0	-410.86	906.36	-1330.12	120.27	-531.06
	(219.64)*	(98.97)***	(172.99)***	(125.08)	(202.14)**
B) Year 1	-477.70	-41.04	-444.05	-44.10	-433.62
	(305.16)	(105.18)	(246.36)*	(48.68)	(289.00)
C) Year 2	-477.94	-107.63	-375.02	4.44	-482.38
	(305.71)	(99.47)	(270.90)	(34.83)	(292.58)
D) Year 3	-621.59	-28.11	-603.36	-17.44	-604.01
	(240.40)***	(158.84)	(232.79)**	(24.42)	(238.82)**
E) Year 4	-639.65	60.99	-683.42	-13.79	-625.86
	(296.96)**	(177.54)	(230.35)***	(11.54)	(299.10)**
F) Years 0-4	-2627.73	790.57	-3436.06	49.38	-2676.93
	(1086.87)**	(473.16)	(937.58)***	(139.21)	(1106.88)**
G) Years 1-4	-2216.88	-115.78	-2105.94	-70.89	-2145.87
	(960.64)**	(447.29)	(811.11)**	(91.60)	(944.56)**
Panel B: main effect					
A) Year 0	1014.79	-127.27	1155.15	679.13	333.75
	(202.69)***	(91.02)	(157.86)***	(115.65)***	(187.07)*
B) Year 1	369.18	60.58	313.67	76.69	292.52
	(282.73)	(96.28)	(226.63)	(45.38)*	(268.64)
C) Year 2	371.40	111.21	264.30	12.83	358.57
	(282.73)	(88.54)	(250.43)	(32.87)	(269.09)
D) Year 3	489.83	19.55	480.12	21.90	467.80
	(219.60)**	(143.86)	(218.49)**	(22.45)	(217.83)**
E) Year 4	563.32	-72.85	619.98	15.96	547.36
	(269.66)**	(160.18)	(212.82)***	(10.78)	(271.46)**
F) Years 0-4	2808.52	-8.78	2833.21	806.50	2002.00
	(1005.35)***	(427.03)	(875.70)***	(131.58)***	(1025.52)*
G) Years 1-4	1793.74	118.50	1678.06	127.37	1666.25
	(887.46)**	(401.75)	(760.03)**	(85.87)	(872.68)*

Notes: The table shows the results of OLS regressions in which the dependent variable is earnings (where the particular type of earnings in question is shown in the column heading). The independent variables are: (A) a variable formed by interacting a dummy for winning the SYEP lottery with the percent of the provider that is in Industry Cluster 1; (B) a dummy for winning the SYEP lottery; and (C) dummies for each provider-lottery combination. Panel A shows coefficients on the variable formed by interacting a dummy for winning the SYEP lottery with the percent of the provider that is in Industry Cluster 1. Panel B shows coefficients and standard errors on the dummy for winning the SYEP lottery. See notes to Tables 3 and 4. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 13. *Effect of SYEP participation on college attendance, with controls*

	Coefficient (SE) on SYEP participation
A) Year 0	0.00036
	(0.0012)
B) Year 1	0.0024
	(0.0015)
C) Year 2	-0.0016
	(0.0025)
D) Year 3	0.00009
	(0.0022)
E) Year 4	-0.0036
	(0.0024)
F) Years 0-4	-0.0043
	(0.0024)*
G) Years 1-4	-0.0035
	(0.0024)
H) Total years of college	-0.0024
	(0.0065)

Notes: The table shows coefficients and standard errors on the SYEP participation dummy from two-stage least squares regressions of a college attendance dummy or total years of college on SYEP participation. The instrument for whether an individual participated in SYEP is a dummy indicating that an individual won the SYEP lottery. The table is identical to Table 5, except that we add controls for the demographics listed in Appendix Table 4. See other notes to Table 5. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 14. *Effect of SYEP participation on earnings and employment outcomes for those 18 years and older*

	(1) Total Earnings	(2) NYC gov't earnings	(3) Non-NYC gov't earnings	(4) Job dummy	(5) Non-NYC gov't job dummy
A) Year 0	535.47	1039.62	-503.93	0.40	-0.066
	(73.63)***	(15.83)***	(71.65)***	(0.013)***	(0.0065)**
B) Year 1	-329.18	45.40	-374.57	0.0016	-0.016
	(122.02)***	(5.09)***	(123.34)***	(0.0064)	(0.0076)**
C) Year 2	-287.44	20.26	-307.71	-0.0011	-0.0071
	(132.09)**	(4.12)***	(133.17)**	(0.0064)	(0.0066)
D) Year 3	-312.36	10.10	-322.46	0.000073	-0.0047
	(158.25)**	(4.18)**	(159.03)**	(0.0055)	(0.0056)
E) Year 4	-140.36	8.38	-148.73	0.0029	0.0011
	(172.48)	(3.23)***	(173.76)	(0.0049)	(0.0050)
F) Years 0-4	-533.87	1123.75	-1657.41	0.059	-0.0056
	(588.31)	(20.28)***	(591.57)***	(0.0063)***	(0.0036)
G) Years 1-4	-1069.34	84.13	-1153.47	0.0063	-0.0014
	(528.85)**	(12.05)***	(533.68)**	(0.0038)*	(0.0041)

Notes: The table shows coefficients and standard errors on the SYEP participation dummy from two-stage least squares regressions of earnings and employment outcomes on SYEP participation. The instrument for whether an individual participated in SYEP is a dummy indicating that an individual won the SYEP lottery. The sample is limited to those 18 years of age or older in the year of SYEP participation, but the table is otherwise based on the identical specification to Table 3. The sample size is 72,313.

Appendix Table 15. *Effect of SYEP participation on incarceration: alternative specifications*

	(1) 2SLS, with covariates	(2) Times incarcerated	(3) Probit	(4) Control Incarceration mean (x 100)
(A) Full population	-0.092 (0.045)**	-0.11 (0.049)**	-0.064 (0.029)**	0.99
(B) 19 and over	-0.49 (0.22)**	-0.46 (0.25)*	-0.39 (0.18)**	1.09
(C) 18 and under	-0.065 (0.045)	-0.085 (0.051)*	-0.047 (0.030)	0.98
D) Below-median inc.	-0.14 (0.074)*	-0.13 (0.077)*	-0.093 (0.049)*	1.34
E) Above-median inc.	-0.051 (0.064)	-0.084 (0.073)	-0.039 (0.042)	0.80
(F) Males	-0.22 (0.094)**	-0.24 (0.098)**	-0.16 (0.066)**	2.09
(G) Females	0.023 (0.020)	0.015 (0.021)	0.027 (0.024)	0.08
(H) White	-0.15 (0.086)*	-0.16 (0.096)*	-0.12 (0.050)***	0.18
(I) Black	-0.16 (0.070)**	-0.19 (0.081)**	-0.13 (0.052)**	1.45
(J) Latino	0.051 (0.078)	0.041 (0.085)	0.027 (0.056)	0.62
(K) Other	-0.063 (0.098)	-0.045 (0.10)	-0.16 (0.23)	0.33
(N) Prior work	-0.037 (0.091)	-0.055 (0.092)	-0.034 (0.056)	0.88
(O) No prior work	-0.12 (0.050)**	-0.14 (0.053)***	-0.082 (0.033)**	1.04
P) 2005-6 lotteries	-0.11 (0.078)	-0.15 (0.086)*	-0.088 (0.057)	1.26
Q) 2007-8 lotteries	-0.081 (0.055)	-0.081 (0.063)	-0.051 (0.032)	0.87

Notes: Columns 1 and 2 show coefficients and standard errors on the SYEP participation dummy from two-stage least squares regressions of a dummy for incarceration in NYS on SYEP participation. In Column 3, the dependent variable is the number of times incarcerated. The instrument for whether an individual participated in SYEP is a dummy indicating that an individual won the SYEP lottery. Column 4 shows coefficients and standard errors from a probit regression of the incarceration dummy on the SYEP participation dummy. Before running the regressions, we multiply the dependent variable by 100 so that coefficients show percentage point changes (for the reader's ease). Note that the probit specification runs "reduced form" regressions that regress the dependent variable directly on the dummy for winning the SYEP lottery, not an instrumental variables regression. The probit coefficients represent marginal effects, calculated at the mean. Adding controls to the specifications in Columns 2 and 3 yields nearly identical results. In addition to the groups discussed in the main text, the table also shows the robustness checks for additional groups discussed in Gelber, Isen, and Kessler (2015). See Table 6 and Appendix Table 10a for other notes and information on samples. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 16. *Effect of SYEP participation on incarceration among those 19 and older at the time of SYEP participation*

	(1) 2SLS	(2) Control Incarceration mean (x 100)	(3) N
A) Below-median inc.	-0.69 (0.31)**	1.05	12,395
B) Above-median inc.	-0.30 (0.28)	1.13	12,392
(C) Males	-0.90 (0.50)*	2.28	10,618
(D) Females	-0.14 (0.0012)	0.22	14,169
(E) White	-0.29 (0.21)	0.19	4,653
(F) Black	-0.26 (0.41)	1.57	10,997
(G) Latino	-1.16 (0.33)***	0.96	5,196
(H) Other	-0.40 (0.42)	0.41	3,941
(I) Prior work	-0.25 (0.23)	0.91	16,067
(J) No prior work	-0.88 (0.045)**	1.41	8,720
K) 2005-6 lotteries	-0.40 (0.35)	1.01	8,107
L) 2007-8 lotteries	-0.53 (0.28)*	1.12	16,680
M) Emp. Zone	-0.66 (0.25)***	1.32	12,706
N) Non-Emp. Zone	-0.30 (0.35)	0.85	12,081

Notes: This table estimates the effect of SYEP participation on incarceration for those 19 or over at the time of SYEP participation. Column 3 shows the sample size in each group. See Appendix Table 15 for other notes. Table 6 row B also shows the effect for the full 19 and older group. The results are nearly identical under other specifications shown in Appendix Table 15. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 17. *Effect of SYEP participation on mortality by calendar year*

	(1) 2SLS	(2) 2SLS, with controls	(3) Control Mortality mean (x 100)
A) 2005	0.0075	0.0076	0.006
	(0.0091)	(0.0091)	
B) 2006	-0.0041	-0.0042	0.017
	(0.011)	(0.011)	
C) 2007	-0.00069	-0.00050	0.032
	(0.011)	(0.011)	
D) 2008	-0.018	-0.017	0.057
	(0.011)*	(0.010)*	
E) 2009	-0.0022	-0.0015	0.10
	(0.018)	(0.017)	
F) 2010	-0.012	-0.011	0.17
	(0.021)	(0.021)	
G) 2011	-0.031	-0.030	0.22
	(0.025)	(0.025)	
H) 2012	-0.041	-0.039	0.29
	(0.024)*	(0.024)*	
I) 2013	-0.059	-0.057	0.36
	(0.028)**	(0.028)**	
J) 2014	-0.073	-0.071	0.41
	(0.031)**	(0.031)**	

Notes: The table shows estimates of the effect of SYEP participation on mortality using a two-stage least squares, linear probability model. Each row shows the results for a different calendar year. We show the effect of SYEP on a dummy for whether an applicant died *by* a given year; thus, the effect *in* a given year can be calculated as the difference between the coefficient for that year and the previous year. Column 1 shows the results of our two-stage least squares specification. Column 2 shows the results of this specification when we add the controls listed in Appendix Table 4. Column 3 shows the mean of the dependent variable (i.e. the dummy measuring the probability of mortality by each year, relative to year of SYEP participation). So that readers can more easily interpret the results, we have multiplied the mortality dummy by 100. The results are comparable with Cox or probit models; we show a two-stage least squares (linear probability) model here to show results that are comparable to the IV results elsewhere in the paper. We use data through October 2014. See Table 7 for other notes and information on samples. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 18. *Effect of SYEP participation on mortality by year since lottery*

	(1) 2SLS	(2) 2SLS, with controls	(3) Control Mortality mean (x 100)
A) Year 0	0.0021	0.0021	0.010
	(0.0050)	(0.0050)	
B) Year 1	-0.000083	0.00013	0.043
	(0.011)	(0.011)	
C) Year 2	-0.0044	-0.0038	0.094
	(0.016)	(0.016)	
D) Year 3	-0.013	-0.012	0.15
	(0.021)	(0.021)	
E) Year 4	-0.013	-0.011	0.20
	(0.022)	(0.022)	
F) Year 5	-0.024	-0.023	0.27
	(0.025)	(0.025)	
G) Year 6	-0.026	-0.024	0.33
	(0.029)	(0.029)	
H) Year 7	-0.096	-0.093	0.44
	(0.035)***	(0.035)***	
I) Year 8	-0.14	-0.14	0.54
	(0.053)***	(0.052)***	
J) Year 9	-0.21	-0.21	0.69
	(0.084)**	(0.084)**	

Notes: The table shows estimates of the effect of SYEP participation on mortality using a two-stage least squares, linear probability model. Each row shows the results for a different year relative to the year of SYEP participation. We show the effect of SYEP on a dummy for whether an applicant died *by* a given year; thus, the effect *in* a given year can be calculated as the difference between the coefficient for that year and the previous year. Column 1 shows the results of our two-stage least squares specification. Column 2 shows the results of this specification when we add the controls listed in Appendix Table 4. Column 3 shows the mean of the dependent variable (i.e. the dummy measuring the probability of mortality by each year, relative to year of SYEP participation). So that readers can more easily interpret the results, we have multiplied the mortality dummy by 100. The results are comparable with Cox or probit models; we show a two-stage least squares (linear probability) model here to show results that are comparable to the IV results elsewhere in the paper. See Table 7 for other notes and information on samples. Because the data extend until 2014, we observe lotteries from all four years (2005, 2006, 2007, and 2008) only until Year 6, implying that sample sizes are not constant across Years 6 to 9; see Appendix Table 4 for sample sizes in the relevant sets of lotteries. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 19. *Effect of SYEP participation on mortality*

	(1) 2SLS, with covariates	(2) Cox	(3) Probit	(4) Mortality dummy mean (x 100)
A) Full population	-0.071 (0.031)**	0.86 (0.054)**	-0.047 (0.020)**	0.41
B) WOTC-eligible	-0.10 (0.10)	0.82 (0.16)	-0.067 (0.066)	0.42
C) WOTC-ineligible	-0.068 (0.030)**	0.87 (.053)**	-0.045 (0.020)**	0.41
D) Below-median inc.	-0.086 (0.061)	0.86 (0.093)	-0.051 (0.036)	0.46
E) Above-median inc.	-0.057 (0.037)	0.88 (0.072)	-0.043 (0.027)	0.36
F) Males	-0.15 (0.059)**	0.84 (0.062)**	-0.11 (0.043)**	0.66
G) Females	-0.015 (0.032)	0.94 (0.12)	-0.012 (0.023)	0.19
H) White	0.0044 (0.076)	1.01 (0.32)	0.0018 (0.047)	0.16
I) Black	-0.058 (0.048)	0.92 (0.068)	-0.047 (0.037)	0.52
J) Latino	-0.14 (0.056)**	0.72 (0.092)**	-0.10 (0.040)**	0.35
K) Other races	-0.052 (0.073)	0.80 (0.22)	-0.038 (0.052)	0.20
L) Older	-0.027 (0.047)	0.96 (0.079)	-0.020 (0.033)	0.42
M) Younger	-0.11 (0.040)***	0.78 (0.070)***	-0.087 (0.031)***	0.40
N) Work in Year -1	0.041 (0.059)	1.09 (0.13)	0.024 (0.042)	0.36
O) No work in Year -1	-0.11 (0.043)***	0.79 (0.065)***	-0.092 (0.032)***	0.43
P) 2005-6 lotteries	-0.16 (0.051)***	0.76 (0.063)***	-0.13 (0.040)***	0.57
Q) 2007-8 lotteries	-0.015 (0.044)	0.96 (0.092)	-0.012 (0.030)	0.33

Notes: Column 1 shows estimates of SYEP participation on mortality using a two-stage least squares, linear probability model with controls. Column 2 shows hazard ratios and standard errors on a dummy for winning the SYEP lottery from a right-censored Cox proportional hazard model of time to mortality. Column 3 shows coefficients and standard errors from a probit regression. Each row shows the results for a different population. We eliminate from the regressions those rare cases of individuals who died between applying to SYEP and the date of first participating in SYEP. See Table 7 and Appendix Table 17 for other notes and information on samples. The Cox and probit specifications run "reduced form" regressions that regress the dependent variable directly on the dummy for winning the SYEP lottery, not an instrumental variables regression. The probit coefficients represent marginal effects, calculated at the mean. Column 4 shows the mean of the "mortality by 2014" dummy, multiplied by 100, in each group. So that readers can more easily interpret the results, we have also multiplied the dependent variable by 100 in Columns 1 and 2. In addition to the groups discussed in the main text, the table also shows the robustness checks for additional groups discussed in Gelber, Isen, and Kessler (2015). *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.

Appendix Table 20. *Effect of SYEP participation on key outcomes with different first stage for each provider*

(1) Dependent variable	(2) Coefficient (SE) on SYEP participation with separate first stage for each provider	(3) Coefficient (SE) on SYEP participation with separate first stage for each provider-year
A) Year 0 Total Earnings	878.06	879.30
	(26.30)***	(26.00)***
B) Year 0 Job	0.71	0.71
	(0.0021)***	(0.0021)***
C) Years 1-4 Total Earnings	-330.21	-315.77
	(140.56)**	(140.10)**
D) Years 1-4 Job	0.010	0.010
	(0.0017)***	(0.0017)***
E) Years 0-4 Total Earnings	547.85	563.53
	(159.65)***	(158.79)***
F) Years 0-4 Job	0.089	0.088
	(0.0015)***	(0.0014)***
G) Total years of College	0.0013	0.0018
	(0.0077)	(0.0076)
H) Incarceration by 2013	-0.099	-0.097
	(0.055)*	(0.048)**
I) Mortality by 2014	-0.077	-0.0088
	(0.035)**	(0.035)**

Notes: The regressions run in Column 2 are the same as the corresponding regressions in Tables 3, 5, 6, and 7, except that in our first stage regression we allow for a different first stage for each provider, by interacting the lottery win dummy with the 59 provider dummies as excluded instruments. Similarly, the regressions run in Column 3 are the same as the corresponding regressions in Tables 3, 5, 6, and 7, except that in our first stage regression we allow for a different first stage in each provider-year combination, by interacting the lottery win dummy with the dummies for each provider-year combination as excluded instruments. For incarceration and mortality, we run the 2SLS linear specification with the binary dependent variable, where the dependent variable has been multiplied by 100 for ease of interpretation (as in previous tables). See other notes to Tables 3, 5, 6, and 7. Standard errors are clustered by provider unless this fails to generate standard errors, in which case we cluster by individual. *** denotes significance at the 1% level; ** at the 5% level; and * at the 10% level.