

## Supplementary Materials

**Appendix Table 1: State-level availability and use of NREGS**

	FY 2006-2007					FY 2007-2008				
	Households Demanded Employment	% Households Provided Employment	Total Persondays	% Women Persondays	Average Persondays per Household	Households Demanded Employment	% Households Provided Employment	Total Persondays	% Women Persondays	Average Persondays per Household
State										
ASSAM	798,179	99.3	57,292,000	31.7	72.3	1,448,243	96.9	48,761,000	30.9	34.8
KARNATAKA	548,532	99.4	22,201,000	50.6	40.7	554,002	99.3	19,778,000	50.3	36.0
MAHARASHTRA	384,944	100.0	15,928,000	37.1	41.4	474,695	100.0	18,486,000	40.0	38.9
RAJASTHAN	1,175,172	100.0	99,887,000	67.1	85.0	2,173,122	99.9	167,838,000	69.0	77.3
UTTAR PRADESH	2,678,700	96.1	82,291,000	16.6	32.0	4,104,283	99.8	136,306,000	14.5	33.3
WEST BENGAL	3,242,594	95.1	44,008,000	18.3	14.3	3,919,996	98.0	96,880,000	17.0	25.2

Source:

[1] The NREGA fiscal year (FY) ends in March.

[2] Source: DMU reports, <http://mnregaweb4.nic.in>

**Appendix Table 2: Descriptive statistics for 2007**

	Urban			Rural			DiD ([5]-[4])-(2)-[1])	
	Late districts	Early districts	p-value	Late districts	Early districts	P-value	Difference	P-value
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Female	0.66	0.66	0.964	0.64	0.63	0.594	-0.010	0.793
Regression Controls								
Age 18 to 30	0.06	0.07	0.836	0.06	0.07	0.325	0.000	0.819
Age 30 to 40	0.3	0.2	0.015	0.19	0.22	0.140	0.130	0.004
Age 40 to 50	0.16	0.21	0.147	0.2	0.21	0.434	-0.040	0.334
Age above 50	0.48	0.52	0.416	0.54	0.5	0.019	-0.080	0.086
No education	0.28	0.31	0.489	0.5	0.57	0.001	0.040	0.444
Less than 4 years of education	0.1	0.08	0.260	0.1	0.11	0.746	0.030	0.281
Years of education between 5 and 8	0.26	0.23	0.516	0.16	0.16	0.884	0.030	0.463
Years of education between 8 and 12	0.02	0.03	0.351	0.01	0.01	0.610	-0.010	0.323
Years of education equal to 12	0.34	0.35	0.786	0.23	0.16	0.000	-0.080	0.027
Widowed	0.06	0.07	0.422	0.06	0.06	0.699	-0.010	0.553
Currently married	0.94	0.92	0.441	0.93	0.93	0.846	0.020	0.532
Single	0.01	0.01	0.991	0.01	0.01	0.648	0.000	0.852
Household owns a phone	0.52	0.56	0.421	0.4	0.28	0.000	-0.160	0.001
Household owns a bike/moped	0.61	0.74	0.001	0.7	0.63	0.000	-0.200	<0.001
Household size	5.57	5.57	0.998	6.04	6.01	0.800	-0.030	0.913
Household has a member over 65	0.15	0.15	0.917	0.13	0.15	0.204	0.020	0.669
Household has a member under 5	0.18	0.15	0.469	0.18	0.22	0.010	0.070	0.093
Mental Health Outcomes								
Depression ICD-10 diagnosis	0.08	0.15	0.013	0.13	0.14	0.765	-0.060	0.038
Sad	0.13	0.26	0.001	0.2	0.22	0.165	-0.110	0.011
Lost interest	0.14	0.26	0.003	0.22	0.24	0.482	-0.100	0.017
Lack energy	0.2	0.28	0.033	0.29	0.3	0.778	-0.070	0.080
Cannot cope	0.27	0.22	0.249	0.2	0.25	0.004	0.100	0.025
Cannot control	0.28	0.19	0.018	0.19	0.22	0.065	0.120	0.003
Hopeless	0.04	0.11	0.004	0.06	0.08	0.148	-0.050	0.029
Suicidal	0.02	0.07	0.008	0.06	0.05	0.261	-0.060	0.004
Low self-esteem	0.02	0.1	0.001	0.07	0.08	0.162	-0.070	0.017
Anxious	0.07	0.14	0.021	0.12	0.12	0.719	-0.070	0.056
Mechanisms								
Currently work	0.43	0.44	0.678	0.47	0.55	0.000	0.070	0.192
Hours worked per day	2.78	3.44	0.070	3.28	3.79	0.001	-0.150	0.706

Days worked per week	2.65	2.78	0.654	2.87	3.38	0.000	0.380	0.238
Total per capita expenditure	719.91	654.8	0.116	578.71	504.78	0.000	-8.820	0.810
Food per capita expenditure	142.14	120.55	0.001	125.21	106.04	0.000	2.420	0.702
Underweight	0.27	0.2	0.055	0.35	0.39	0.083	0.110	0.024
WHO Disabilitiy Index	16.83	15.47	0.301	17.18	18.36	0.065	2.540	0.095
Social Index	0.84	0.96	0.353	1.21	1.07	0.009	-0.260	0.050
Number of Observations	181	367		752	2605			

Notes:

[1] Raw sample means for analysis sample for 2007.

[2] Source: Study on global AGEing and adult health (SAGE),  
<http://www.who.int/healthinfo/sage/en/>.

**Appendix Table 3: District Characteristics**

	Late	Early	P-value
<i>Indices from Indian Planning Commission Report 2003</i>			
Index for Percentage SC (1991 Census)	0.85	0.74	0.000
Index for Agricultural wages (1996/1997)	0.31	0.19	0.000
Index for output per agricultural worker (1990/1993)	0.12	0.07	0.000
<i>Current Characteristics from NSS - 61st round</i>			
Rural ST fraction	0.03	0.11	0.009
Rural SC fraction	0.18	0.23	0.087
Rural Proportion Illiterate	0.4	0.48	0.005
Rural Female employment rate	0.23	0.28	0.146
Rural Male employment rate	0.61	0.6	0.347
Rural Proportion under poverty line	0.18	0.22	0.171
NBA proportion	14.3	13.21	0.727
Number of districts	30	81	

Sources: Data on district indices are from Planning Commission Report of the Task Force - Identification of districts for wage and self-employment programmes.; Data from National Sample Survey 2004-2005 (61st round) are from Schedule 10 - Employment and Unemployment, <http://catalog.ihsn.org/index.php/catalog/2316/study-description> ; Data on the sanitation campaign known as Nirmal Bharat Abhiyan (NBA) are available at: <https://data.gov.in/catalog/nirmal-bharat-abhiyan-year-wise-district-level-achievements> and [tsc.gov.in/tsc/NDSAP/StatewiseDistrictwisePhysicalProgress.xml](https://tsc.gov.in/tsc/NDSAP/StatewiseDistrictwisePhysicalProgress.xml) .

**Appendix Table 4: Pre-program tests using World Health Survey from 2003**

	Sad	Lost interest in things	Lack Energy	Cannot cope	Cannot control	Total per capita expenditures	Food per capita expenditures	Currently working	Underweight
	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
<i>Panel A: Females</i>									
Rural*Early Treatment	0.083 (0.0647)	0.087 (0.0678)	-0.03 (0.0665)	0.062 (0.0672)	0.004 (0.0484)	187.572 (220.9370)	-38.199 (36.0697)	0.033 (0.0714)	0.039 (0.0604)
Early Treatment	-0.028 (0.0863)	-0.068 (0.0856)	-0.04 (0.0798)	-0.087 (0.0836)	-0.014 (0.0674)	-155.825 (234.5317)	25.733 (40.1697)	-0.026 (0.0955)	-0.045 (0.0686)
Rural	-0.033 (0.0511)	-0.065 (0.0579)	0.05 (0.0518)	-0.047 (0.0606)	-0.014 (0.0377)	-171.024 (190.4220)	-10.403 (27.0229)	0.042 (0.0596)	0.044 (0.0489)
Number of observations	2211	2211	2211	2211	2211	2043	2197	2179	2078
<i>Panel B: Males</i>									
Rural*Early Treatment	0.052 (0.0746)	0.041 (0.0663)	0.123* (0.0644)	0.061 (0.0730)	-0.069 (0.0542)	45.733 (80.7680)	57.954 (86.8413)	-0.045 (0.0448)	0.065 (0.0757)
Early Treatment	0.053 (0.0926)	0.016 (0.0818)	-0.02 (0.0732)	-0.019 (0.0954)	0.034 (0.0660)	11.929 (89.0369)	-91.672 (97.1825)	0.057 (0.0439)	-0.116 (0.0866)
Rural	-0.02 (0.0608)	-0.007 (0.0523)	-0.096* (0.0512)	-0.086 (0.0641)	0.038 (0.0318)	-177.065*** (67.0283)	-144.333* (81.1923)	0.034 (0.0365)	-0.021 (0.0626)
Number of observations	1850	1850	1850	1850	1850	1695	1840	1830	1766

Notes:

[1] Regressions include controls for district characteristics (the three indices from the Indian Planning Commission, fraction ST and SC, fraction illiterate, female and male employment rates, and fraction under poverty line for rural areas of the district, and measure of bureaucratic efficiency based on the performance of the NBA program); individual characteristics (dummies for age 30 to 40, 40 to 50, and greater than 50, dummies for years of education under 4, between 5 and 8, between 8 and 12, and 12, as well as marital status, household asset ownership, household size, presence of a child under 5 in the household, presence of an elderly person above 65 in the household), state fixed effects and interview month fixed effects.

[2] Standard errors in parentheses, clustered at the district level. Number of districts=111.

[3] \* denotes significance at the 10% level, \*\* denotes significance at the 5% level, and \*\*\* denotes significance at the 1% level.

**Appendix Table 5: Effect of NREGS on Mental Health Among Treated Districts Only by Intensity of Treatment**

	Depression ICD-10 diagnosis	Sad	Lost interest in things	Lack Energy	Cannot cope	Cannot control	Hopeless	Suicidal	Low Self-esteem	Anxious
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
<i>Panel A: Females</i>										
Rural*High Intensity Treatment	-0.211*** (0.0645)	-0.116 (0.0775)	-0.255*** (0.0804)	-0.076 (0.0772)	-0.04 (0.0623)	0.012 (0.0794)	-0.132*** (0.0495)	-0.137*** (0.0326)	-0.193*** (0.0532)	-0.172*** (0.0563)
High Intensity Treatment Rural	0.121* (0.0722)	-0.001 (0.0887)	0.114 (0.0782)	-0.064 (0.0810)	0.111 (0.0681)	0.082 (0.0783)	0.025 (0.0508)	0.027 (0.0382)	0.091 (0.0633)	0.059 (0.0661)
	-0.007 (0.0357)	-0.002 (0.0380)	-0.045 (0.0458)	0 (0.0425)	-0.041 (0.0403)	-0.03 (0.0459)	-0.027 (0.0318)	-0.033 (0.0222)	-0.016 (0.0283)	-0.002 (0.0330)
Number of observations	1877	1877	1877	1877	1877	1877	1877	1877	1877	1877
<i>Panel B: Males</i>										
Rural*High Intensity Treatment	-0.107 (0.0698)	-0.208** (0.0995)	-0.085 (0.1093)	0.057 (0.1151)	-0.072 (0.0813)	-0.146* (0.0789)	0.036 (0.0534)	-0.066** (0.0332)	0.086* (0.0482)	0.042 (0.0644)
High Intensity Treatment Rural	-0.013 (0.0933)	0.116 (0.1256)	-0.04 (0.1283)	-0.237* (0.1284)	-0.011 (0.0799)	0.236*** (0.0752)	-0.110* (0.0580)	-0.001 (0.0369)	-0.176*** (0.0586)	-0.108 (0.0783)
	0.014 (0.0391)	-0.051 (0.0630)	-0.034 (0.0743)	-0.07 (0.0585)	-0.05 (0.0429)	0.021 (0.0322)	-0.005 (0.0365)	0.002 (0.0263)	0.01 (0.0319)	0.003 (0.0394)
Number of observations	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095

Notes:

[1] Regressions include controls for district characteristics (the three indices from the Indian Planning Commission, fraction ST and SC, fraction illiterate, female and male employment rates, and fraction under poverty line for the rural areas of the district, and measure of bureaucratic efficiency based on the performance of the NBA program); individual characteristics (dummies for age 30 to 40, 40 to 50, and greater than 50, dummies for years of education under 4, between 5 and 8, between 8 and 12, and 12, as well as marital status, household asset ownership, household size, presence of a child under 5 in the household, presence of an elderly person above 65 in the household), state fixed effects and interview month fixed effects.

[2] High intensity treatment is defined as a district where NREGS recipients worked on average 50 days or more (out of a maximum of 100). Out of the 81 districts that should have received the program in Phase 1 or Phase 2, there are 16 high intensity treatment districts, all of which received the program in Phase 1.

[3] Standard errors in parentheses, clustered at the district level. Number of districts=81.

[4] \* denotes significance at the 10% level, \*\* denotes significance at the 5% level, and \*\*\* denotes significance at the 1% level.

**Appendix Table 6: Heterogeneity in the Effect of NREGS on Mental Health by Household Poverty**

	Depression ICD-10 diagnosis	Sad	Lost interest in things	Lack Energy	Cannot cope	Cannot control	Hopeless	Suicidal	Low Self- esteem	Anxious
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
<i>Panel A: Females</i>										
Rural*Early Treatment	-0.187** (0.0835)	-0.266** (0.1031)	-0.243*** (0.0838)	-0.136* (0.0727)	-0.083 (0.0964)	-0.104 (0.1223)	-0.169** (0.0659)	-0.222*** (0.0613)	-0.152*** (0.0537)	-0.195** (0.0758)
Rural*Early Treatment*Permanent Income	0.140* (0.0723)	0.162* (0.0886)	0.069 (0.0877)	0.024 (0.0737)	0.085 (0.0761)	0.129 (0.0901)	0.115* (0.0613)	0.155*** (0.0563)	0.100* (0.0538)	0.154** (0.0676)
Early Treatment*Permanent Income Rural*Permanent Income	-0.106* (0.0621)	-0.137* (0.0764)	-0.089 (0.0826)	-0.043 (0.0584)	-0.095 (0.0619)	-0.089 (0.0821)	-0.109** (0.0522)	-0.104** (0.0459)	-0.076* (0.0441)	-0.115* (0.0592)
	-0.071** (0.0317)	-0.091** (0.0418)	-0.033 (0.0439)	-0.037 (0.0493)	-0.141*** (0.0430)	-0.150*** (0.0426)	-0.036 (0.0309)	-0.082** (0.0319)	-0.046 (0.0310)	-0.086*** (0.0290)
Early Treatment	0.121 (0.0747)	0.234** (0.0912)	0.236*** (0.0807)	0.119* (0.0626)	0.031 (0.0901)	-0.023 (0.1270)	0.143** (0.0586)	0.142*** (0.0541)	0.113** (0.0472)	0.132* (0.0675)
Rural	0.104** (0.0467)	0.191** (0.0771)	0.142** (0.0635)	0.128** (0.0538)	0.096 (0.0769)	0.099 (0.0830)	0.066* (0.0379)	0.119*** (0.0353)	0.075** (0.0363)	0.120*** (0.0455)
Number of observations	2476	2476	2476	2476	2476	2476	2476	2476	2476	2476
<i>Panel B: Males</i>										
Rural*Early Treatment	-0.134 (0.1071)	-0.075 (0.1154)	-0.089 (0.1389)	-0.157 (0.1416)	-0.032 (0.1308)	0.136 (0.0927)	-0.075 (0.0926)	-0.083 (0.0842)	-0.132 (0.0877)	-0.127 (0.1048)
Rural*Early Treatment*Permanent Income	0.175* (0.1035)	0.01 (0.1232)	0.125 (0.1249)	0.166 (0.1350)	0.043 (0.1268)	-0.021 (0.0888)	0.106 (0.0791)	0.1 (0.0799)	0.164** (0.0738)	0.175* (0.1030)
Early Treatment*Permanent Income	-0.194** (0.0920)	-0.004 (0.0989)	-0.131 (0.1005)	-0.16 (0.1025)	-0.194 (0.1176)	-0.086 (0.0711)	-0.114 (0.0747)	-0.097 (0.0778)	-0.155** (0.0631)	-0.209** (0.0885)

Rural*Permanent Income	-0.03 (0.0553)	-0.079 (0.0594)	-0.033 (0.0659)	-0.023 (0.0730)	0.018 (0.0604)	0.01 (0.0453)	-0.027 (0.0361)	-0.035 (0.0335)	-0.062 (0.0436)	-0.034 (0.0548)
Early Treatment	0.118 (0.1038)	0.045 (0.1178)	0.119 (0.1391)	0.172 (0.1308)	0.187 (0.1347)	-0.027 (0.0921)	0.078 (0.0906)	0.079 (0.0824)	0.124 (0.0788)	0.146 (0.0995)
Rural	0.01 (0.0607)	0.044 (0.0591)	-0.041 (0.0778)	-0.028 (0.0801)	-0.083 (0.0514)	-0.134*** (0.0497)	0.005 (0.0451)	0.02 (0.0395)	0.059 (0.0588)	0.01 (0.0550)
Number of observations	1429	1429	1429	1429	1429	1429	1429	1429	1429	1429

Notes:

[1] Regressions include controls for district characteristics (the three indices from the Indian Planning Commission, fraction ST and SC, fraction illiterate, female and male employment rates, and fraction under poverty line for the rural areas of the district, and measure of bureaucratic efficiency based on the performance of the NBA program); individual characteristics (dummies for age 30 to 40, 40 to 50, and greater than 50, dummies for years of education under 4, between 5 and 8, between 8 and 12, and 12, as well as marital status, household asset ownership, household size, presence of a child under 5 in the household, presence of an elderly person above 65 in the household), state fixed effects and interview month fixed effects.

[2] The permanent income measure, provided in the SAGE data, is a latent income index based on ownership of 21 assets (for more details, see Appendix 4 in Arokiasamy et al., 2013). In our sample, it has a mean of about 0.6 and a standard deviation of about 0.5.

[3] Standard errors in parentheses, clustered at the district level. Number of districts=111.

[4] \* denotes significance at the 10% level, \*\* denotes significance at the 5% level, and \*\*\* denotes significance at the 1% level.