

Rural Employment Guarantee, Women's Participation and Children's Welfare: Evidence from India

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Abstract

We study the effect of the number of days worked by households under India's National Rural Employment Guarantee Scheme (NREGA) on expenditure patterns and individual time-use. As NREGA encourages women's participation, we focus on the type of consumption goods on which expenditure is likely to be affected as well as time-use of adults and children by gender. We exploit the plausible exogenous variation that some households in a village were provided with work within 15 days of registration, as mandated by the law, whereas others were not, on account of administrative bottlenecks, as an instrument for the number of days worked. We find that greater number of days worked increases household food expenditure, and especially spending on dairy, proteins, vegetables-that are likely to raise nutritional status of children; with no effect on spending on adult goods like cigarettes and alcohol. Also, households are more likely to spend on clothing and footwear of girls. Greater adult participation in NREGA reduces leisure time for both boys and girls and raises time spent caring for others and studying outside school for boys, with no effect on girls. Women's time spent pursuing domestic chores is reduced and that in non-agricultural work is found to increase. Overall, the consumption effects indicate a likely improvement of children's welfare, especially of girls; whereas the effect on children's time-use needs to be carefully evaluated.

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1 Introduction

The National Rural Employment Guarantee Act (NREGA) was passed by the Parliament of India in 2005. The Act aims to provide atleast 100 days of employment to rural households who are willing to perform unskilled, manual work in a financial year. The main aim of the Act was to provide wage employment to rural households and the creation of durable assets in rural areas. The NREGA costs about 1% of India's GDP (India's GDP at current prices was US \$ 1.877 trillion in 2013, World Bank) and covers about 11% of the world's population (Niehaus and Sukhtankar, 2013). The poverty head count ratio (at national poverty line) of India was 37.2% in 2005, at the time of implementation of the NREGA. Given the sheer scale of the number of people the Act attempts to cover and poverty, it is one of the largest anti-poverty programmes in the world (Ravallion, World Bank, 2013). Therefore, it is important to understand the welfare implications of this programme on rural households.

The NREGA provides provisions that encourage the participation of women. Khera and Nayak (2009) note that there are numerous provisions in the NREGA that are particularly of significance to women. For instance, the Act stipulates that one-third of NREGA workers should be women. Also, rural households are free to choose how 100 days of work are to be allocated among household members and this provides women in the household the opportunity to participate in NREGA. One of the most important provisions of the Act is equal wages for men and women. This is especially important because women often receive lower wages in rural labour markets relative to men ¹. Also, the Act requires the provision of childcare facilities in worksites where there are more than five children younger than six years of age and the requirement that works should be predominantly provided within the village. These provisions of the Act, therefore, encourage the participation of women under the programme. Significant differences in women's participation, however, exists across states. Women constituted 85% of the person-days in Kerala, 80% in Tamil Nadu, 58% in Andhra Pradesh; whereas they made up about 18% of person-days in Uttar Pradesh and 6% in Jammu and Kashmir during 2008-09 ². In this context, this paper estimates the causal impact of the number of days worked under NREGA on a number of outcomes that can potentially influence household welfare- food and non-food expenditure at the household level and individual time-use, using household survey data from the state of Andhra Pradesh in south India.

¹“How Women Seized NREGA”, Richard Mahapatra, Down to Earth, 2010.

²“MGNREGA Sameeksha: An Anthology of Research Studies on the Mahatma Gandhi National Rural Employment Guarantee Act, 2005, 2006-2012”, Ministry of Rural Development, Government of India.

As NREGA encourages women's participation, it is particularly important to study the type of goods on which household consumption expenditures are likely to be affected. Specifically, women are more likely to spend on goods that can increase children's welfare (Duflo, 2003; Duflo and Udry, 2004; Anderson and Baland, 2002; Doepke and Tertilt, 2014; Hoddinott and Haddad, 1995). In the current context, we find that greater number of days worked by a household under NREGA is not only associated with a 7 percentage point increase in monthly household food expenditure, but also a significant increase in spending on dairy, fruits and vegetables, proteins which include fish, meat and eggs- all of which can potentially increase nutritional status of children. Further, we find increased spending on some luxury goods such as edible oil, sugar, spices and beverages like tea/coffee and soft drinks. On the other hand, we do not find any significant change in the spending on adult goods like alcohol and tobacco products. We also find that households are more likely to spend on clothing and footwear of girls. These findings on household consumption expenditure patterns along with the evidence that women constitute a large proportion of NREGA workers in Andhra Pradesh, indicate that NREGA has the potential of raising children's welfare, and in some cases of female children. We also study the effect of NREGA days worked by the household on time-use patterns of individuals. This is motivated by the fact that often engagement of adults in paid work, particularly by women can influence time-use patterns of children. In particular, greater adult participation in rural works programme can increase household income and income earned by women can improve schooling outcomes through investment in children's education. Khera and Nayak (2009) find that childcare facilities were not common in NREGA worksites in a large number of states, although the law requires such facilities to be provided. Lack of childcare facilities can increase the time spent by older children in domestic chores, taking time away from school, which could adversely affect their welfare. We find that greater number of days worked by the household is associated with reduction in the number of days per month women spend performing domestic chores with no associated effect for men. Further, number of hours per day spent typically in wage work and non-agricultural work is higher for women from households that work a larger number of days under the programme, whereas no such effect is found for men. We also find a reduction in leisure for both girls and boys and an increase in the number of hours per day spent caring for others and studying outside school only for male children. However, there is no significant change in the time spent by children on paid work, working in household enterprise, domestic tasks or in school. Although reduction in leisure reduces children's welfare, it is perhaps comforting to find that there have been no significant increase in engagement in paid work or domestic chores by children on

account of greater adult participation, especially those of women, in NREGA.

This paper analyses the effect of the number of days worked under NREGA on household welfare and it is worth understanding why it is important to study effect of the programme along the intensive margin. A large number of existing studies on NREGA study the effect of participation in the programme (that is, participated or not-the extensive margin) or the effect of living in a district where NREGA is being implemented (intent-to-treat effect)³. However, a number of studies indicate that the demand for workdays under NREGA is far from falling. Using micro-data such as the National Sample Survey (NSS), Dutta et al (2012) demonstrate that many households wanted more days of employment than what they were provided with in almost all states of India and Mukhopadhyay (2012) illustrates the same for the state of Rajasthan. Further, Maiorano (2014) using survey data for the states of Andhra Pradesh and Rajasthan show that rural households would like to work more under NREGA and that this was also applicable to those households that had completed the statutory 100 days of work under the programme⁴. There have been reported demand of increasing the number of workdays under NREGA in the state of Tamil Nadu⁵, the increase in the number of days under NREGA from 100 to 150 in Rajasthan⁶ and the Government of India raised the number of NREGA days to 150 for tribal households throughout the country, thereby affecting tribals in the states of Andhra Pradesh, Chattisgarh Jharkhand and Orissa, before the Parliamentary elections in February, 2014⁷. These studies and events, therefore, provide motivation to analyse the effect of the number of days worked under the programme on household welfare, in contrast to the existing studies that focus on the extensive margin or attempt to estimate the intent-to-treat effect of the programme.

A few studies have documented the importance of NREGA for rural households in influencing household consumption spending. Ravi and Engler(2015) compare outcomes such as household consumption expenditure, number of meals forgone, household savings, physical and mental health of household members between households who received work and those that applied but did not receive work under NREGA, in a matching and triple-difference estimation framework and using data collected from Medak district in Andhra Pradesh. They find that households receiving work under the programme have higher consumption expenditure and lower number of meals forgone relative to those that were not placed in any work. Liu and Deininger (2013), using a similar estimation

³Studies by Bose (2013), Imbert and Papp (*mimeo*), Gehrke (*mimeo*) are some examples.

⁴“Do it Like Andhra Pradesh”, Diego Maiorano, *The Indian Express*, June 24, 2014.

⁵“Increase working days under NREGA scheme”, *The Hindu*, January 1, 2013.

⁶“NREGA days of work raised to 150”, *The Times of India*, March 7, 2013.

⁷“Now 150 workdays for tribals under MGNREGA”, *The Hindu*, February 28, 2014.

framework and household survey data collected from Andhra Pradesh, have documented an increase in the calorie and protein consumption of participating households. However, these studies do not investigate the type of consumption goods on which household consumption expenditure has increased and whether those goods are more likely to be beneficial to children, especially female children. In this context, this paper studies not only the impact of the NREGA on household consumption expenditure, but also the types of goods on which household consumption expenditure changes. Therefore, this study can throw some light on the composition of household consumption expenditure and whether increased expenditure on consumption goods are more likely to disproportionately affect adult's utility (such as through increased spending on adult goods like tobacco and alcohol) or be beneficial for children as well (through spending on milk, vegetables, meat, clothing and footwear and so on). Bose (2013), on the other hand, has used multiple rounds of the NSS (National Sample Survey) consumption expenditure data (however, mostly thin rounds and one thick round) and estimated the impact of living in a district where NREGA is operational on a number of different food and non-food items, by exploiting the phase-wise rolling in of the programme at the district level in a difference-in-difference estimation framework. However, there is some concern that the phase-wise rolling in of the programme was not totally exogenous and the author is likely only picking up intent-to-treat effect of the programme, as she is unable to identify whether a household actually participated in it. In contrast, this paper uses an instrumental variable estimation framework, exploiting the plausibly exogenous variation of whether a household in a village received work within the mandated 15 days of registration of demand or not on account of administrative reasons, to identify the causal impact of the programme. Further, district-time trends have also been controlled for to take into account administrative learning that could be potentially higher in early-implementing districts. In this way, we can possibly mitigate the issue arising from the fact that phase-wise implementation of the NREGA was not completely random. Also, this paper attempts to identify the average treatment effect of the programme, instead of the intent-to-treat effect. Thus, from the perspective of policy evaluation, this study can provide a better estimate of the effect of the policy on household welfare outcomes. Further, this study also estimates whether the participation of women vis-a-vis those of men could have differential effects on household consumption expenditure patterns. The effect of NREGA on time allocation by household members has remained relatively unexplored, to the best of my knowledge. Islam and Sivasankaran (2014) have used the NSS data and an estimation strategy similar to Bose (2013) and find increased time spent in education by younger children and more time spent working outside by older children

in districts where NREGA was operational. However, similar to Bose (2013), this study identifies the intent-to-treat effect of the programme. On the other hand, in this paper, we attempt to use the instrumental variable estimation strategy to identify the average treatment effect of the NREGA on time-use by adults and children and study time-use patterns by gender.

In this paper, the causal impact of the NREGA is estimated using an instrumental variables (IV) estimation strategy. This is because the OLS estimates of the number of days worked under the programme could yield biased estimates. Even after controlling for household level characteristics that could potentially influence the number of days worked under NREGA, unobserved individual characteristics of household members could influence the total number of days a household works under the programme. Therefore, the coefficient on the number of days worked under NREGA estimated using OLS would be biased. We exploit a provision under the NREGA that specifies that households should be provided with work within 15 days of registration of demand for work to construct the instrument for the likely endogenous explanatory variable of interest- number of days worked under the programme. The survey asks households whether they were provided with work within 15 days of registration of demand or not. Therefore, the instrumental variable used in this paper is a binary variable that assumes the value 1 if a household was provided with work within 15 days of registration and is 0 otherwise. However, it is important to investigate whether being provided with work within 15 days of registration (henceforth “on time”) is likely to be a valid instrument. Studies have shown that rationing of work under NREGA is quite rampant. Job rationing implies that households receive less work than what they desired or are not being placed in work at all (Dutt et al, 2012). Job rationing is not found to be systematically based on a household’s economic characteristics, but depended on which village the household was located in on account of the scattered nature of worksites (Ravi and Engler, 2015). I also provide suggestive evidence that conditional on village fixed effects, a household’s socio-economic characteristics such as household’s caste, gender of the household head, political affiliation or group membership like self-help groups are uncorrelated with whether a household receives work on time or not. Thus, possible administrative delays in the provision of work, which are unlikely to be correlated with household characteristics and are therefore potentially exogenous to the household, results in some households receiving work on time while it being delayed for the others. This indicates that the exclusion restriction for instrumental variable is unlikely to be violated. Given the studies on job rationing under NREGA, households that receive work on time are more likely to work a greater number of days under NREGA relative to those who were not provided with work

on time. Thus, the instrument is likely to be positively correlated with the endogenous variable, the number of days worked under NREGA.

In terms of the magnitude of the impact of NREGA on consumption spending, we find that an additional day worked under NREGA raises spending on dairy, proteins, vegetables by around 2% relative to their mean. Further, spending on luxury goods such as edible oils, sugar, spices increases by about 1.2% and beverages such as tea/coffee and soft drinks increases by about 3%. We do not find any significant change on spending on adult goods such as alcohol or tobacco products from the instrumental variable estimation. We also find increase in medical spending by about 3% and the likelihood of spending on girl child's clothing and footwear increases by about 1.5% relative to the sample mean for each additional day spent working under NREGA. In the context of time-use patterns, we find that an additional day worked under NREGA by adults increases time spent caring for others by 1.6% by children and this is primarily observed for boys; whereas time spent in leisure or playing is reduced by 0.6% relative to the mean and this is observed for both boys and girls. However, we do not find any significant increase in the number of hours spent in a typical day engaged in domestic chores or paid activity for children on account of adult participation in NREGA. As Andhra Pradesh has been documented to be one of the well-performing states in terms of NREGA implementation, these magnitudes could potentially represent upper bound estimates of the effect of NREGA on household welfare outcomes at the current level of institutional quality and administrative learning regarding NREGA implementation. This study is especially important as it suggests significant improvement in household welfare, especially those of children on account of large participation by women at a time when the newly elected federal government is attempting to downsize the programme and which could lead to substantial reduction in programme benefits ⁸.

It is to be noted that the instrumental variable estimates the Local Average Treatment Effect (LATE). In other words, the IV would be identifying the effect of the number of days of work under NREGA only for those households for whom being provided with work on time caused them to work a greater number of days under the programme (the compliers). While it is not possible to identify these households individually from the data, it is important to understand whether this sample of compliers holds any policy relevance. Given the sheer scale of poverty and the findings that suggest that working a greater number of days under the programme can improve household welfare

⁸“Economists urge Modi not to squeeze NREGA for rural poor,” Nita Bhalla, *Reuters*, October 15 2014; “28 Lead economists write to PM Modi urging not to dilute NREGA,” *Deccan Chronicle*, October 14 2014.

(with respect to the outcome variables studied in this paper), checking administrative bottlenecks that can likely impede the supply of work under the programme, is important from the perspective of policy makers. It is in this sense, that the LATE results can inform policy makers about the importance of supplying work “on time” to rural households and take steps to reduce institutional frictions in the delivery of this programme.

This paper is organized as follows: Section 2 outlines the institutional background of the NREGA and particularly in Andhra Pradesh, as it is the state on which this study is based; Section 3 describes the data used, the sample as well as the outcome variables and controls; Section 4 contains the estimation framework; Section 5 presents the results and Section 6 concludes.

2 Institutional Background of the NREGA

2.1 NREGA in India

The National Rural Employment Guarantee Act (NREGA) was enacted by the Parliament of India in 2005. The Act aims to provide 100 days of employment to rural households who are willing to perform unskilled, manual work. NREGA was implemented in a phase-wise manner. Therefore, it was first implemented in 200 poorest districts of the country in 2006, thereafter an additional 130 districts received coverage in 2007 and the Act was extended to the entire country by early 2008.

The Act provides pivotal role to India’s decentralized elected rural bodies, called the *Panchayati Raj* in the implementation of the programme. Households in a village should apply for a “job card” by submitting a written or oral application to their elected village council, called the *Gram Panchayat* (henceforth,GP). The GP issues the “job card” to the household free of cost, which is used to record the details of the work received by each adult member, the number of days of work provided,wages paid, the type of NREGA projects in which the member worked as well as wages received (Figures 1-3 provide an outline of a typical job card). A household can apply for work, almost at any time during the year, after receiving the job card. Applications are submitted to the GP and the law mandates that employment should be provided within 15 days of registration of demand, failing which households are eligible to receive unemployment allowance. The daily unemployment allowance is mandated to be set at atleast one-fourth of the wage rate for the first thirty days and subsequently at half of the wage rate for the rest of the financial year (Figure 4 depicts how the job card records the payment of unemployment allowance for the household). Further, NREGA workers should receive wages weekly

and wage payments should not be delayed beyond a fortnight. The Act mandates that not more than 40% of the total project expenditures can be devoted to materials/capital. Therefore, the bulk of expenditure for each NREGA project is earmarked for labour wage payments (The Gazette of India, Ministry of Law and Justice, 2005). Also, about 50% of NREGA projects are to be planned and executed by the GP. NREGA projects are to be prepared through consultation with the GP residents. The GP forwards the list of recommended projects to the sub-district programme officer, who in turn forwards it to the district programme officer for final technical and financial approval (Afridi, Iversen and Sharan, 2014).

During the 2013-2014 financial year at the all-India level, about 51.7 million households were allotted work under NREGA (which comprises about 99% of the number of households who applied for work). 52% of the total person-days generated during 2013-2014 is attributable to women workers. The expenditure on labour was around Rs. 26,68,410 lakh and comprised 75% of the total spending on NREGA projects ⁹. However, unemployment allowance are not paid out in a large number of states even when prospective workers were not provided with work under the programme within 15 days of registration of demand ¹⁰.

2.2 NREGA in Andhra Pradesh

As the current study is based on household and individual survey data, called the Young Lives Survey (YLS), collected from the south Indian state of Andhra Pradesh (or AP), it is important to understand the Afridi, Iversen and Sharan (2014) provide a detailed summary of how NREGA functions in Andhra Pradesh. AP has been lauded as one of the leading performers in the implementation of NREGA in the country. The state provided employment to 3.4 million households during the financial year 2013-2014. During this year, 5,948,234 individuals from the state received employment in NREGA projects. Of them, 3,184,172 (or 54%) were women workers. 72% of the NREGA expenditures were on wage payments and the remaining on capital/materials ¹¹. Further, Andhra Pradesh is known to conduct regular social audits, in contrast to most other Indian states. The Society for Social Audits, Accountability and Transparency (SSAAT) was set up as an autonomous arm of the Department of Rural Development of the state government for

⁹MGNREGA Public Data Portal at <http://www.nrega.nic.in/netnrega/home.aspx>

¹⁰“Unemployment allowance under job scheme paid in only 7 states”, Ruhi Tewari, *Livemint*, March 31 2010; “No unemployment allowance under NREGA in India”, Aurangzeb Naqshbandi, *OneWorld South Asia*, Nov 17, 2009.

¹¹MIS Reports at <http://www.nrega.ap.gov.in/Nregs/>. These computations on Andhra Pradesh exclude the districts of AP that were transferred to the state of Telengana in 2014.

this purpose. Therefore, the state has often been praised for its attempt to maintain a high standard of accountability in the execution of the NREGA. Further, the increased reliance on information technology by the state is seen as one of the steps in curtailing delay in wage payments. which have plagued the programme in a number of other states ¹².

NREGA is implemented through the three-tier elected *Panchayati Raj* system, as in other states. There are three tiers of administration for NREGA projects in AP- the district, sub-district or *mandal* and the village. Figures 5 and 6 from Afridi, Iversen and Sharan (2014) depict the officials at the different tiers of the decentralized village level government who are responsible for implementation of the NREGA. Village councils or GP in AP are reportedly less powerful relative to GPs in other states, such as Kerala or Rajasthan (Afridi et al, 2014). Unlike other states, the role of the GPs are largely limited to recommending the list of projects and overseeing the implementation of NREGA projects. Sub-district or mandal official called the *Mandal Parishad Development Officer* or the MPDO, assisted by the Assistant Programme Officer (or APO) play a major role in sanctioning funds and providing technical approval for NREGA projects. Therefore, the mandal officials play a key role in implementing NREGA, unlike other states where the GPs play a very important role (Mukhopadhyay, 2012; Afridi, Iversen and Sharan, 2014; Maiorano, 2014). Further, although the NREGA was envisaged as a demand-driven scheme, in AP it follows a rigid top-down supply-driven implementation mechanism. Imbert and Papp (2014) report the findings of the World Bank (2011) in their paper where they quote “In practice, very few job card holders formally apply for work while the majority tend to wait passively for work to be provided.” Afridi et. al (2013) and Maiorano (2014) also note that the NREGA in AP is supply rather than demand driven. Maiorano (2014) notes that rather than the elected GP head, it is the non-elected Field Assistant (FA) who takes all the important decisions about NREGA at the village level. Although Afridi, Iversen and Sharan (2014) note that GPs in their sample had an important say in the appointment of the FA, Maiorano (2014) mentions that the FA is hired on a contractual basis by the Society for Rural Development (a government controlled NGO) and is appointed by the MPDO. The FA assists the GP in the registration of households, distribution of job cards, receipt of applications employment and reporting of demand to the MPDO, maintenance of attendance at worksites, verification and closure of labour records (Afridi, Iversen and Sharan 2014). Therefore, the FA can potentially play a key role in the implementation of NREGA at the village level.

¹²“NREGA: Andhra Pradesh shows the way”, Mihir Shah and Pramathesh Ambasta, *The Hindu*, Sept 8 2008.

The YLS data used in this paper reports NREGA participation of household members during July 2008-June 2009. So, it may be instructive to look at the situation of NREGA in AP during the financial year 2008-2009. We find that during this year, 3,216,447 households were provided with work in AP. 5,491,144 individuals received employment and of them 52% were women workers. Therefore, similar to 2013-2014, the financial year 2008-2009 witnessed a large participation of women in NREGA. 77% of the total expenditure was on labour wage payments, the remaining was spent on capital/materials. During 2008-2009, AP spent Rs. 138,772.42 lakh (at current prices) or around US\$ 225 million on NREGA (a bulk of which was spent on wage payments as noted earlier) (MIS Reports at the NREGA website for Andhra Pradesh and its districts as noted in Footnote 11. The share of women workers and that of wages in total expenditure for 2008-2009 are similar to those districts of AP which are currently under the jurisdiction of the state of Telengana). Although the Act stipulates that households are entitled to receive 100 days of wage employment in a financial year, a number of households have worked for more than 100 days under NREGA and this is especially true for AP. Unfortunately, the NREGA administrative reports do not provide such information for 2008-2009, but this information is available for later years. We find that during 2013-2014, 687,479 households worked for more than 100 days and these include households in districts that are currently in the state of Telengana(MIS Reports available at the NREGA Website of Government of India as in Footnote 9). Also, as AP has implemented NREGA in a rigid top-down manner, the demand side has been largely ignored. The state government has been attempting to unionize prospective NREGA workers with a view to disseminating information about workers' entitlements under NREGA and boost the demand side of the programme. But this initiative is a recent phenomenon, namely from 2012 ("Do it Like Andhra Pradesh", Dieogo Maiorano, *The Indian Express*, June 24 2014.). Therefore, during the time of the survey (2009), these institutions to boost the demand side of the NREGA were largely absent.

3 Data and Descriptive Statistics

The data used for analysis in this paper are obtained from Round 3 (2009-2010) of the Young Lives Survey (YLS). The YLS is a child-level panel survey conducted in the state of undivided Andhra Pradesh (AP bifurcated and some of its districts were transferred to form the new state of Telengana in 2014) and three rounds of the survey has been conducted till now. Round 1 (2002) is largely not comparable with the Rounds 2 and 3 and it corresponds to the period before the NREGS was implemented. Round 2 (2007),

on the other hand, corresponds to the first year of the implementation of the NREGS. However, the survey does not provide detailed information on NREGS for Round 2. It was only in Round 3 a number of detailed information on NREGS has been collected, namely whether the household was provided with work within 15 days of registration or not, whether the household was paid wages within 15 days of completion of work or not, whether childcare facilities were present in the worksite, whether single women have been denied employment as well as the number of days different household members worked under the programme, the reasons for not participating in the programme at all and the number of days adult household members worked during the peak and lean agricultural seasons. Such detailed information is not provided in Round 2 of the survey and thus it is difficult to use Round 2 for the current analysis.

The YLS survey was designed in order to cover three major agro-climatic regions of Andhra Pradesh (AP)-Telengana, Rayalaseema and Coastal Andhra. The survey covers the districts of Anantapur, Kadapa, Karimnagar, Mahbubnagar, Srikulam, West Godavari and Hyderabad. Karimnagar and Mahbubnagar lie in the Telengana region, Anantapur and Kadapa are in the Rayalaseema region, Srikulam and West Godavari belong to Coastal Andhra, whereas Hyderabad is the metropolitan capital region of the state. The survey covers 20 blocks (*mandals*) across these 7 districts. of which 15 blocks are rural. The survey has been designed to represent the population of AP. Of the 7 district, Hyderabad, is predominantly urban and NREGS has never been implemented in Hyderabad. Out of the remaining 6 districts, the NREGS has been in operation in Anantapur, Kadapa, Karimnagar and Mahbubnagar from 2006, in Srikulam from 2007 and in West Godavari from 2008. By the time of Round 3, therefore, all the 6 districts except Hyderabad were brought under the ambit of the NREGS. As the reference period for the household's NREGS participation is the preceding 12 months or is based on 12 month recall period (which for Round 3 would correspond to 2008-09), NREGS was already in operation in all 6 districts by Round 3 of the YLS. In Round 3 of the YLS, households were interviewed between August, 2009 and March, 2010. However, it is to be noted that more than 98% of the households were interviewed between August, 2009 and December, 2009.

3.1 Sample

The working sample includes households in the rural area (excluding the district of Hyderabad altogether), that have not moved since 2007 and that have had atleast one adult member participating, that is, seeking work under the NREGS during the last 12 months.

Firstly, we only include households residing in the rural area and exclude the district of Hyderabad altogether because the NREGS was implemented only in the rural areas and it was never implemented in Hyderabad, as it was predominantly urban. Secondly, we restrict the households to include only those that have not changed their location of residence since 2007. This can mitigate the possibilities of selective migration (especially to localities where the programme is likely to be well implemented). In this paper, we study the effect of the number of days a household worked in NREGS (that is, along the intensive margin) on household welfare. But it might be of some concern that including only the households who have sought work in the programme may lead to biased estimates as we are likely to drop households from the sample who have not sought work and for whom the number of days worked under the programme would be 0. However, it is to be noted that among the sampled households who reside in the rural area and have not moved since 2007 and excluding the district of Hyderabad altogether, about 70% of the households have had atleast one member who have sought work under the programme during the preceding 12 months. Therefore, a large proportion of households have sought work under NREGS. Further, considering the sample of households for which information on the number of days worked under NREGS can be computed from household-member level information, about 86% of the households have had atleast one member who have sought work under the programme. Further, the plausible exogenous variation that we use in this study is whether households have been provided with work within 15 days of registration and this information is only available for households that have had atleast one adult job seeker under NREGA during the previous year.

The total number of households in the rural area (excluding Hyderabad altogether) who have not moved since 2007 and for whom the total number of days worked in NREGS is available is 1,652¹³. Of these, 1,413 households (about 86% of this sample) have had atleast one household member who has sought work under NREGS during the reference period and the remaining 239 (14% of the sample) have not sought work. Our working sample consists of these 1,413 households. In this working sample, about 5% of the households have not worked under the programme at all during the reference period. Therefore, the sample includes observations from those households as well who have not worked a single day under the programme despite having atleast one adult seeking work under NREGS.

¹³The summary statistics of the outcome variables and the covariates, described in the next section, do not appear to differ substantially between the sample of rural households who have not moved since 2007 and rural households who have not moved since 2007 and for whom the days worked under NREGS during 2008-09 are available. Tables and figures are available if asked for.

3.2 Outcome Variables: Consumption Expenditures

Household level data from the YLS show that NREGA wages account for 25% of a household's income on average (Table 1) and on taking into account crop income and transfers they account for 19% (Table 2) and 18% (Table 3) respectively. NREGA wages usually account for second most important source of earnings, on average, for rural households during 2008-2009. As NREGA wages account for a large share of household income, it is important to understand the impact of NREGA on expenditure patterns. The outcome variables at the household level correspond to consumption expenditures. The household level outcome variables pertaining to consumption expenditures is (log) of real (2006 rupees) per capita food expenditure of the household. Further, real per capita consumption expenditures on a variety of food items are considered. The expenditure on these food items are reported in the survey on a 15 day recall period. These food items include real per capita spending on rice, proteins(eggs, fish and meat), milk, vegetables and fruits, salt/spices, sugar, edible oils, beverages (tea, coffee, soft drinks), processed foods, packaged sweets and alcohol. The expenditure on these food items are reported as value of these food items bought and consumed by the household. The real per capita spending on tobacco products (like cigarettes) are reported on a 30 day recall basis. The spending on non-food items are also considered as outcome variables. They include the real spending on rent and electricity, real per capita medical expenditures, clothing for adults, footwear for adults. Further, whether the household spends any proportion of its budget on clothing and footwear for female children on the "index" child (child on whom detailed information have been collected in the survey) are also considered as outcome variables. The spending on non-food items are reported on a 12 month recall period. The choice of the recall period is largely based on spending frequency of the different consumption items. Items such as foods are likely to be bought more frequently than non-foods and therefore the recall period for food items is generally lower than that for non-food items.

It might be of some concern that the NREGA days worked were computed for the period July 2008-June 2009; whereas the YLS survey was conducted during August 2009-March 2010 and the recall period for the food items were the preceding 15 days from the survey date. There might be issues as to how representative the preceding 15 days are likely to be for expenditure on the food items throughout the year. Firstly, it is to be noted that the choice of the recall period is purely on the basis of the frequency with which a household is likely to spend on the items. As food items are likely to be frequently bought, 15 day recall period would likely be appropriate to understand expenditure patterns on foods. Secondly, the overall rainfall situation during 2008-09

and 2009-10 were very similar and rainfall was neither deficient nor in excess in the state (Directorate of Economics and Statistics, Government of Andhra Pradesh, 2008-2009; 2009-2010). Further, about 98% of the households were surveyed between August 2009-December 2009 and this period does not coincide with major festivals or harvesting seasons, which would systematically bias our understanding of consumption expenditures on the basis of the 15 day recall period during the survey period. Therefore, the 15 day recall period of food items during the survey period is likely to be representative of overall spending pattern on foods for 2008-09. The consumption outcome variables on different foods is the per capita spending in real 2006 rupees. In this context, it might be interesting to understand whether buying and consuming foods is important. Table 4 reports the mean and standard deviation of the share of each of the foods bought and consumed out of what is bought, consumed out of own stock and transfers received by the household. We find that the mean of the share of rice bought and consumed is 46% (s.d. of 41%), pulses is 66% (s.d is 37%), milk is 80% (s.d is 40%), proteins is 97% (s.d. is 14%), vegetables and fruits is 95% (s.d. is 17%), salt/spices, sugar and edible oils is 80% (s.d. is 21%), tea/coffee and soft drinks is 98% (s.d. is 16%), prepared foods, packaged foods and alcohol is at least as large as 98% (s.d. is around 6%). Therefore, focusing on how much a household bought and consumed could likely capture a household's overall consumption expenditure pattern as the share of foods bought and consumed is a large fraction of how much was bought, consumed out of own stock and received in transfers.

Figure 11 depicts that the mean share of food expenditure in total monthly expenditure is around 60%, which is a substantial share household budget. The mean of the logarithm per capita food expenditure for the household in 2006 rupees is 5.91, which translates into an average per capita monthly food spending of 368.71 in 2006 rupees. The mean and standard deviation of spending on other food items and non-food items have been reported in Tables 5 and 6. Figure 12 depicts graphically the distribution of per capita monthly household expenditure on food as a whole in 2006 prices.

3.3 Outcome Variables: Time-Use

The individual level outcome variables correspond to time-use of individuals. The survey asks the most important activity that individuals performed during the reference period (that is individuals are asked to recall their most important activity during the preceding 12 months). The individuals are then asked the number of months in the year, the number of days in a month and the number of hours in a day this activity was done. For the purpose of the present analysis, we consider the number of days in a month and the

number of hours in a day an individual would engage in the activity typically. Further, as individual's age is reported in the survey, it is possible to categorise the time-use according to adults (18 years of age or older) and children (age is less than 18 years). The time spent on different activities are self-employment (includes when a self-employed individual is engaged in the cultivation of food crops, non-food crops, aquaculture, raising livestock, manufacturing, services, business or any other non-agricultural activity), wage employment (includes individuals engaged in wage employment in agriculture and in non-agricultural activities), agricultural activities (which includes individuals who are self-employed in agriculture, earn agricultural wages, are annual farm servants and any other agricultural work), non-agricultural activities (that includes individuals who are self-employed in manufacturing, business, services, other non-agricultural pursuits; receive wages for non-agricultural work and who are in regular-salaried employment), household chores and other unpaid activities. Especially for children, the survey collects additional information on how many hours per day typically a child spent sleeping, caring for others, doing domestic tasks, tasks on family farm or other family business (household enterprise), paid work outside the house, at school, studying outside school, playing or general leisure on a 12 month recall period. The information on these detailed child level activities have also been used as outcome variables. Tables 8, 9 and 10 provide the summary statistics of individual level time-use for both adults and children.

3.4 Main Explanatory Variable: Number of NREGS Days

The household member level information contains details on the number of days each adult household member (18 years of age or older) worked under NREGS between July, 2008 and June, 2009. Members were asked separately the number of days NREGA employment was provided to them between July, 2008 and February, 2009 (which represents the peak agricultural season) and between March, 2009 and June, 2009 (which represents the lean agricultural season). Here, interviewers were instructed to refer to the job card of the households as well as the post-office passbooks that the household has. Thus, the number of days each household member worked under the programme was recorded on the basis of the job card that the household possessed. Figures 1-4 illustrate a job card¹⁴. Further, the payment received by the member was verified using the passbook of the household. From the individual member level information, we are able to compute the total number of days a household worked during 2008-2009 as well as separately for the days worked during the peak and lean agricultural seasons. The explanatory variable

¹⁴Source: Ministry of Rural Development, Government of India.

of interest in this analysis is the total number of NREGA days worked by the household during the reference period (that is, during 2008-09). The mean of the NREGA days worked for households in the working sample is around 58 days and the standard deviation is around 57 days. Figure 7 depicts the distribution of NREGA days for the working sample. Although, we find that there are households who have completed more than 100 days of work from the YLS data, it must be noted that this is reflective of the administrative data obtained for AP. For the financial year 2013-2014, about 15% of SC/ST (Scheduled Caste/Scheduled Tribe) households who had worked for more than 100 days of NREGA work were from AP and this was one of the highest among all states (MGNREGA Public Data Portal, as in Footnote 9). Overall, 687,492 households have worked for more than 100 days in AP during 2013-2014 (MGNREGA website, as in Footnote 9).

3.5 Other Covariates

The information on other covariates that are controls in the empirical analysis are obtained from the YLS and the summary statistics are provided in Table 11. Overall the summary statistics do not seem to differ between the working sample and all households. In the working sample, average household size is about 5 with a standard deviation of 2. The proportion of households that are Scheduled caste (SC), Scheduled Tribe (ST) and Backward Castes (OBC) is 25%, 17% and 48% respectively. The caste and the tribe distribution in the working sample is similar to that of the state (Census of India, 2001). Hindus households account for 98% and Muslims and Christian households account for 1% of the working sample respectively. The mean of the amount of land owned by households in the working sample is 2.5 acres and a standard deviation of 16.2 acres. 37% of adults are literate (s.d. is 0.35). 99% of the households in the working sample have access to the Public Distribution System (PDS), 93% of the household heads are male and the household head lives in the household for 98% of the households in the working sample. The average age of head of the household head is 40.31 years (s.d. of 9.49 years), whereas the mean of the average age of households in the working sample is 26.21 years (s.d. of 6.04 years). 55% of the households report that they are aware that the NREGA is subject to social audits to maintain transparency and implementation of the programme. Further, average household earnings, excluding NREGA earnings is Rs. 20,515.79 (earnings from agricultural wages, casual wages, regular salary, selling commodities, sale of livestock products net of the costs incurred from the activity- which are the major sources of household income as in Tables 1, 2 and 3). The average crop income, net of the costs

incurred in cultivation of the households is Rs. 7,317.57. household income have been computed from the household’s occupational activity over the 12 month recall period and crop income has been computed with reference to the last agricultural year (June 2008-May 2009).

4 Estimation Framework and Empirical Strategy

The baseline estimation technique used in this analysis is the OLS. The following estimation equations are used in the analysis:

4.1 Regression Equations for Consumption Expenditures

$$y_{hvm} = \alpha + \beta NREGA_{days} + \gamma X_{hvm} + \delta_d * t + \phi_v + \psi_m + \theta_d + \eta_R + \varepsilon_{hvm} \quad (1)$$

Equation (1) is estimated using OLS and the unit of observation is a household. The outcome variable y_{hvm} corresponds to a household h in community (which can be thought of as similar to a village) v in mandal/block m . The outcome variable of interest refers to log of household’s per capita monthly food expenditure in real 2006 rupees as well as real per capita expenditure on a number of food and non-food items based on recall. $NREGA_{days}$ is the explanatory variable of interest. It is the number of NREGA days worked by adult members of the household during the past year in reference to the survey, that is, July 2008-June 2009. X_{hvm} includes household level controls that can likely influence consumption expenditure patters. We include household size, proportion of literate adults, amount of land owned, age of the household head, average age of household members and age squared and the proportion of males in the household. We also include dummy variables to control for whether the household is SC, ST, OBC as well as if it is Hindu, Muslim or Christian, has access to PDS, whether the household head is male, the household head lives in the household and are aware that the NREGA is subject to social audit. We control for household’s income in real 2006 rupees from major sources excluding NREGA over the preceding 12 months and crop income from the last agricultural year (results remain unchanged even if we do not control for household’s earnings from major sources and crop income over the last year preceding the survey). We control for years since the programme has been in place in each district with respect to the reference period for NREGA participation in the survey, in order to account for district specific administrative learning regarding programme implementation (t). ϕ_v , ψ_m , θ_d , η_R are village/community, mandal/sub-district, district and region fixed effects (controlling for only village fixed effects would be subsuming mandal/sub-district, district and region

fixed effects). ε_{hvm} is the regression disturbance term clustered at the village/community level. In an alternative specification, we interact the proportion of women participants in NREGA from the household with *NREGA*days and we include the proportion of women participants as controls to estimate the potential heterogeneous impact of women vis-a-vis men participating in the programme (also 96% of the households had at least one female adult participating in NREGA).

4.2 Regression Equations for Time-Use

$$y_{ihvm} = \alpha + \beta NREGAdays + \gamma X_{ihvm} + \delta_d * t + \phi_v + \psi_m + \theta_d + \eta_R + \varepsilon_{ihvm} \quad (2)$$

Equation (2) is estimated using OLS and the unit of observation is an individual. The outcome variable y_{ihvm} corresponds to an individual i of household h in community (which can be thought of as similar to a village) v in mandal/block m . The outcome variable of interest either refers to the number of days per month or the number of hours per day typically spent by individual i during the 12 months preceding the survey. Adult members are classified as those who are 18 years of age or older. *NREGA*days is the explanatory variable of interest. It is the number of NREGA days worked by adult members of the household during the past year in reference to the survey, that is, July 2008-June 2009. X_{ihvm} includes controls as in X_{hvm} and in addition also includes a dummy for whether the individual is female, is literate and age in years. ε_{ihvm} is the regression disturbance term clustered at the household level. All other notations have analogous meanings as in equation (1) above. We estimate equation (2) separately for adults and children as well as by gender for both adults and children.

4.3 Empirical Strategy

We estimate both equations (1) and (2) by OLS in the first step. However, the OLS results may be biased. This is because the number of NREGA days worked by a household in a year is likely to be endogenous. The number of NREGA days worked by each household member is recorded from the job card of the household and this information is aggregated to the household level. Omitted variables such as ability to perform hard, manual labour (which is the nature of NREGA works), getting sick and choosing not to go to work can influence the number of days an individual works for NREGA and can hence influence the number of days household works for NREGA in the aggregate ¹⁵. This is even after we

¹⁵99% of the individuals in the individual level survey report having no long-term illness or disability and hence long-term physical ailments leading households to decide against working for NREGA in the first place is unlikely.

can likely control for the situation that poorer households would self-select into NREGA by controlling for the household’s land ownership, household’s income from major sources and its crop income over the 12 month recall period.

This motivates us to use an instrumental variable (IV) estimation strategy to deal with the potential omitted variable bias in *NREGA days*, our explanatory variable of interest. We exploit the variation that some households in the village were provided with work within 15 days of registration and others were not in order to identify the effect of the number of days worked in NREGA projects on our outcome variables of interest. We argue that this variation is largely on account of administrative reasons and, therefore, potentially exogenous to the household. We use this variation as an instrument for the number of days NREGA worked. Our instrument is, therefore, a binary variable that assumes the value 1 if a household received work within 15 days of registration and is 0 otherwise. This variation is only valid for households who have had at least one adult member participating in NREGA, which is our working sample. Also, NREGA employment can be received at any time during the year. Our instrument is more likely to capture how likely is it for households to receive employment “on time” during the recall period, instead of a specific point in time during the past year.

Clearly, for our instrument to be valid, it should be correlated with the endogenous explanatory variable of interest, *NREGA days* and satisfy the exclusion restriction. The first stage regressions are shown in Tables 21-36. We see that that the instrument is strongly positively correlated with *NREGA days*. In other words, households that receive employment within 15 days of registration are more likely to work a greater number of NREGA days relative to those that do not receive work “on time”. Further, the first stage F-stat on the excluded instrument is around 15 and, therefore, the instrument does not suffer from the weak instruments problem.

The issue of obtaining work within 15 days of registration or “on time” needs further exploration and is likely associated with job rationing under NREGA. Ravi and Engler (2015), in a study of rural households in Medak district of AP, have found incidence of job rationing under NREGA. Job rationing implies that households were willing to participate in NREGA, but were not provided with work. However, they do not find evidence to support that job rationing was systematically based on a household’s socio-economic characteristics, but depended on which village the household was located in on account of the scattered nature of work sites. This was because work had not started simultaneously in all villages of the district, especially during the early phases of the programme (2007). Dutta et al (2012) use the NSS (National Sample Survey) data from 2009-2010 to understand the incidence of job rationing across different states in

India. The authors note that many households were likely rationed in the sense that they wanted more days of employment than what they were provided with. Given the limitation imposed by data, the authors focus on rationing under NREGA as implying households not being provided with work at all. The authors find that administrative data from government websites report almost no unmet demand for NREGA work. This is not only because the work application process and the system for recording demand were not operational in many places (Khera, 2011); but state and local governments do not have incentive to report unmet demand because in that case, unemployment allowance need to be paid out and the cost of which would have to be exclusively borne by the state governments. Although the former situation is largely not applicable for AP, the latter cannot be ruled out. Dutta et al (2012) emphasize the importance of household surveys instead of administrative data to understand the constraints on work supply under NREGA. In AP, the demand rate for NREGA work was 47% and rationing rate (share of rural households who wanted work but did not get it) was 25%, relative to 45% and 56%, which were the corresponding all-India average respectively. The authors find little evidence that local-level processes contributing to rationing is biased against the poor and the scheme still appeared to reach out to marginalized sections of the village, like the SC/ST. In summary, these studies attempt to provide suggestive evidence that job rationing, either in the form of not being provided with work at all or lesser number of days than desired are important issues being faced by the NREGA, even in well-performing states like AP. Therefore, we conjecture that households which have been provided with work “on time” work a greater number of days relative to those who have not been provided with work on time.

While the first stage regression shows whether the instrument is relevant or not, that is, whether it is correlated with *NREGA*days or not; the exclusion restriction cannot be tested in the situation of a single endogenous variable and single instrument. Table 20 attempts to provide suggestive evidence that the instrument is unlikely to violate the exclusion restriction as we cannot formally test the validity of the exclusion restriction. In Table 20, we test whether certain household characteristics are correlated with the likelihood of a household receiving employment “on time”. This is because certain household characteristics like political affiliation, holding other non-political positions of authority in a village, land ownership, caste, having a male household head can make some households more likely to receive employment “on time” relative to others in a village (these characteristics are usually associated with positions of power or influence and can potentially affect who are more likely to receive benefits of public programmes). This can lead to violation of the exclusion restriction. Firstly, Afridi et al (2014) and Maiorano (2014)

note the important role played by the Field Assistant (FA) in the implementation of the NREGA. In general, villagers cannot choose who would be appointed as the FA. However, in practice, the FA could be appointed according to the preference of the presiding Member of the Legislative Assembly (MLA) (Maiorano, 2014) and households with political affiliation similar to those of the FA/MLA may be favoured. Secondly, households getting employment “on time” may be correlated with increased awareness about their rights under NREGA. As AP has a history of SHGs and given the powerlessness of village councils in AP, the SHGs have played an important role in building awareness about worker’s rights under NREGA (Reddy, 2012). Thirdly, households belonging to certain castes in a village may be systematically favoured vis-a-vis others in being provided with work “on time. For example, households belonging to the GP head/FA’s caste or tribe may be more likely to work “on time”. Also, as Khosla (2011) notes that the two major political parties in AP-Telugu Desam Party (TDP) and the Congress obtain their political allegiance from the OBCs and the SCs respectively, household caste and political affiliation could be interrelated and could likely systematically bias which households get work “on time” relative to others in a village.

We find that only 2% of the households in the working sample have had members who have held any position of authority that were political in nature. Therefore, it is unlikely that political connections could systematically bias which households get work “on time”. Further, Reddy (2012) notes that although SHGs have played an important role in raising awareness levels about their NREGA entitlements, households and SHGs were not aware that wage seekers are entitled to compensation if no work was provided within 15 days of registration. Reddy (2012) notes that “This was probably because even those responsible for creation of awareness did not anticipate...failure of provision of work”. Therefore, it is unlikely that belonging to SHGs could create a systematic bias in which households get work “on time”. Also, unionizing NREGA workers in order to raise their awareness about their NREGA entitlements by the AP government started only from 2012. Therefore, households with increased awareness are the ones that are likely to get employment within 15 days of registration is unlikely to hold during the period of our analysis (2008-2009). In Table 20, we regress the probability of receiving work within 15 days of registration (or “on time”) on pre-determined measures of “importance’ of households in a village- the dummy that a household has held any position of authority (political and non-political such as SHGs), the number of years a household has held any position of authority,, the fraction of household members who are leaders of such groups, the fraction of household members who have attended frequent meetings of such groups as well as dummies for the household’s caste/tribe (whether SC, ST or OBC), the amount

of land owned, dummy for whether the household head is male, the proportion of males in the household and age of the household head. We also control for community/village fixed effects. Column (3) is our most preferred specification. Conditional on village fixed effects, we do not find that any of the characteristics are significantly correlated with the probability of getting work “on time” (except the dummy for whether a household is OBC, but we control for household caste in both the first and second stage of the IV analysis). Further, conditional on village fixed effects, the characteristics also do not jointly influence the probability of getting “work on time”. The Wald test for joint significance, performed by excluding the village fixed effects, provides a value of 7.74, which is not statistically significant. Therefore, we are unable to reject the null hypothesis that none of the characteristics jointly influence getting work “on time”. Table 20, thus, attempts to provide suggestive evidence in favour of potential conditional exogeneity of the instrument (conditional on village fixed effects). Overall given the rigid top-down approach of implementing NREGA in AP and conditional on village fixed effects, whether households get employment within 15 days of registration or not is potentially exogenous to the households and are more likely to be driven by administrative issues that influence the supply of NREGA works.

5 Results

This section discusses both the OLS and IV results for each of the consumption expenditures and time-use outcome variables.

5.1 Consumption Expenditure Outcome Variables

The regression equation used for estimation is equation (1). The consumption expenditure outcome variables that we consider are log per capita monthly spending on food in real 2006 rupees as well as per capita spending on rice, pulses, milk, proteins (eggs, meat and fish), vegetables and fruits, salt/spices, sugar and edible oil, beverages (tea/coffee and soft drinks), alcohol and tobacco in 2006 prices. Also, we consider expenditure on rent and electricity, per capita spending on adult’s clothing and footwear and medical spending in 2006 prices as outcome variables. Further, we construct dummy variables that assume the value of 1 if the household has spent any amount on clothing and footwear of the surveyed female child and 0 otherwise. These outcome variables are at the household level.

5.1.1 OLS Results

The OLS results for real per capita monthly food expenditure are reported in Table 12, whereas the results for spending on food and non-food items have been reported in Tables 13 and 14 respectively. We focus on the results contained in panels corresponding to our working sample in each of the tables.

In Table 12, we successively add controls as we proceed through the columns and column (4) which has the full set of controls is our most preferred specification. We do not find any significant impact of the number of NREGA days worked by the household on its real monthly per capita food spending. We use the specification in column (4) of Table 12 as our regression specification for each of the outcome variables in Tables 13 and 14. From Table 13 we find that, the number of NREGA days worked by the household has no statistically significant impact on real per capita spending on pulses, milk, proteins, vegetables and fruits, salt/spices, sugar and edible oils, beverages and tobacco; although it appears greater number of days worked under NREGA appears to increase per capita real spending on rice and reduce per capita real spending on alcohol in the working sample. We do not find any significant effect of the number of NREGA days worked by the household on non-food consumption expenditures.

5.1.2 IV Results

The corresponding IV results and first stage regressions are reported in Tables 21, 22 and 23. In Table 21, the outcome variable of interest is real per capita monthly spending on foods at the household level and results for the working sample have been reported. In Panel B of Table 21, the first stage results are reported. Controls are added successively through the columns- column (1) has the least number of controls, whereas column (4) has the full set of controls and as such is our most preferred specification. We find that the number of NREGA days worked is higher for households who were provided with work within 15 days of registration relative to those who were not provided with work “on time”. In other words, the endogenous explanatory variable, the number of NREGA days worked by a household, is positively correlated with our instrument. We observe that adding controls reduces the size of the F-statistic on the excluded instrument, which is a binary variable that assumes the value of 1 if the household was provided with work within 15 days of registration and is 0 otherwise. However, across all four specifications, the value of the F-statistic is higher than 10 and in column (4), the F-statistic on the excluded instrument is 15.33. Therefore, from our first-stage regressions in Panel B of Table 21, we find that our instrument is unlikely to suffer from the weak-instruments bias.

Now, in Panel A of Table 21, we report the IV results, where the number of NREGA days worked by the household has been instrumented. Across all four columns, we find that greater number of NREGA days worked by the household causes an increase in log per capita monthly real food expenditure at the household level. We also find that the IV coefficient is greater in magnitude relative to its OLS counterparts in Table 12 across all four columns. This indicates the issue of a plausible omitted variables bias that resulted in the attenuation bias in the OLS coefficients. From column (4) of Panel A in Table 21, we find that the IV coefficient on NREGA days is statistically significant at the 5% level of significance and a one standard deviation increase in the number of NREGA days worked by the household results in a 42 percentage points increase in log per capita real monthly food expenditure by the household. This translates to a 7 percentage points increase relative to the sample mean of the outcome variable of interest.

In Tables 22 and 23, we report the IV regression results for different foods and non-foods respectively for our working sample and using the specification in column (4) of Table 21 (that is, the full set of controls). From Panel A of Table 22, we find that greater number of days worked by a household raises its per capita real expenditure on milk, proteins, vegetables and fruits, salt/spices, sugar and edible oils as well as beverages. We do not find any significant increase in spending on rice, pulses and adult goods such as alcohol and tobacco. Except for rice, the magnitude of the IV coefficients are larger than that of the OLS in absolute value, indicating a potential omitted variable bias (Table 13 results for the working sample). For real per capita rice spending, it could be a combination of omitted variable bias and potential selection bias, in the sense that households that work a greater number of days are also the ones that are more likely to spend a greater proportion of their budget on rice as rice is a relatively cheap source of energy and a staple. In terms of magnitude, we find that an additional day worked under NREGA increases per capita real spending by around 2-3 % relative to the sample mean of the outcome variables for which we find statistically significant increase in spending. Now, from Panel A of Table 23 we find that greater number of NREGA days worked by a household decreases spending on rent and electricity; whereas it is found to increase spending on adult footwear, medical spending as well as the probability that the household spends on clothing and footwear of the girl child. Further, the IV coefficients are larger than their OLS counterparts in absolute value, indicating a plausible omitted variable bias in our explanatory variable of interest (Table 14 results for the working sample). Although the decreased spending on rent and electricity is perplexing, it is more likely to be driven by the fact that few households are likely to spend on rent. An additional day worked under NREGA raises spending on the aforementioned non-food

items by around 1-3% relative to their sample mean.

5.1.3 Potential Heterogeneity: Women vs Men NREGA Workers?

Increased spending on food as a whole on account of increased number of days worked under NREGA is unlikely to throw light on potential heterogenous impact on household welfare. However, from our IV results in Panel A of Tables 22 and 23, we find some interesting findings on the nature of food and non-food items on which households are more likely to spend. Since a large literature documents that men and women in a household have distinct preferences and as such women are more likely to spend on goods that are beneficial for their children, we are motivated to study the potential heterogenous impact on consumption spending due to the gender of the NREGA workers as a large proportion of NREGA workers are women.

The findings from Table 22 indicate an increased spending on relatively nutritious foods like proteins, vegetables and fruits. There is also increased spending on “luxury items” such as salt/spices, sugar and edible oils as well as beverages such as tea/coffee and soft drinks. Also, we find no significant change in the spending on adult goods like tobacco products and alcohol. These potentially lend support to the existing literature which documents that men and women are likely to spend their earnings on different items in the household. The increased spending on nutritious items, along with some “luxury goods” as well as no change in spending on adult goods are more likely to affect children’s welfare in the household and are more likely to be driven by women NREGA workers in the household. Further, the findings from Table 23 on the increased likelihood of households to spend on girl child’s clothing and footwear also provides suggestive evidence that it is more likely to be due to the participation by women.

In our data, we find that for only 4% of households, there were no women NREGA workers. Although, there is a relatively large concentration of households that had 50% of NREGA workers that were women, the survey contains a large number of households from which more than 50% participants in NREGA were women. Nevertheless, the finding that for a large number of households, 50% of the NREGA workers were women is quite significant. This is because women in rural labour markets typically are paid less than men and women in rural India usually have less autonomy regarding participation in labour markets (that is, working outside one’s family farm or working for someone who is not a relative). However, the NREGA provides provision of childcare facilities at work sites as well as provision of work within one’s village, which is conducive for women’s participation who perform bulk of domestic chores and social norms may often dictate against travelling long distances for work. Also, NREGA provides equal wages for men

and women, which also encourage women’s participation. In Tables 29 and 30, we interact the proportion of women participants in NREGA from the households with the number of NREGA days worked by the household and include this interacted variable along with the fraction of women NREGA workers in our regression. We assume, for simplicity, that the proportion of women workers is exogenous and instrument for the interacted variable. In Panel A of the tables we provide the IV coefficients for the working sample, whereas in Panel B we report the first stage regressions. Similar to our findings from Table 22, we find from Table 29 that greater spending on milk, vegetables and fruits, proteins, salt/spices, sugar and edible oils and beverages due to increased number of NREGA days worked by the household is higher for households that have had a greater fraction of women participants in NREGA. As before, we do not find any significant impact on the spending on adult goods. We find similar findings as Table 23 from Table 30 on non-food items, that include the likelihood of spending on a girl child’s footwear and clothing. Thus, Tables 29 and 30 attempt to provide some suggestive evidence that greater participation of women workers results in greater increase in spending on nutritious items, some “luxury” food items, girl child’s clothing and footwear with no impact on basic staples and adult goods, with increased number of NREGA days worked by the households.

5.2 Time-Use Outcome Variables

The outcome variables that we consider here are at the individual level. For both adults and children, we consider the number of days in a typical month and the number of hours in a typical day spent in self-employment, wage work, agricultural work, non-agricultural work, domestic chores and unpaid act as outcome variables. These time-use variables are obtained with reference to the past 12 months. Further, for children, we also consider the number of hours spent in a typical day sleeping, caring for others, performing domestic tasks, in household enterprise, in paid work, in school, studying outside school and playing/leisure as outcome variables.

5.2.1 OLS Results

Tables 15 and 16 report the OLS results for adults, whereas Tables 17, 18 and 19 do so for children in the households. We consider the the OLS results for the working sample. The regression specification used is the one column (4) of Table 12 (which was the full set of controls). However, for these individual level regressions, we also include dummy for whether the individual is female, is literate and age in years as additional controls.

From Table 15, we find that greater number of NREGA days worked by the household is associated with lower number of days spent in a typical month during the past year in self employment by adults, while it is associated with greater number of days in a typical month spent performing wage work. We do not find any significant influence on any other time-use patterns from this table. We obtain analogous findings when the outcome variables are number of hours in a typical day during the past year for adults from Table 16.

On the other hand, from Table 17 we find that greater number of NREGA days worked by the household is associated with lower and higher number of days per month in the past 12 months spent performing non-agricultural work and domestic chores respectively by children, with no significant influence on other time-use outcome variables. We find exactly similar patterns when the outcome variable is number of hours in a typical day during the past 1 months for children, as in Table 18. Further, we find from Table 19 that greater number of NREGA days performed by the household is associated with greater number of hours in a typical day spent in domestic tasks and lower time for playing/leisure for children. We do not find any significant influence of NREGA days on other time-use patterns such as hours spent sleeping, caring for others, in household enterprise, in paid work, in school or studying outside school. In this context it is worth noting that the number of NREGA days corresponds to the aggregate number of NREGA days worked by the household as a whole and this is on account of the participation in NREGA by adult members of the household.

5.2.2 IV Results

Tables 24 and 25 report the IV results for time-use for adults, while Tables 26, 27 and 28 do for children. These results are reported for the working sample and correspond to the regression specifications used in their corresponding OLS regression tables. Further, Panel A in all tables report the IV coefficients and Panel B include the first-stage results including the F-statistic on the excluded instrument. We find that across all tables, the F-statistic on our instrument (which is the excluded instrument) is well above 10, indicating that our instrument is unlikely to suffer from the problem of weak-instruments. Further, the number of NREGA days worked by the household is positively correlated with our instrument, as earlier. Also, we find, by and large, the IV coefficients are larger than their OLS counterparts in absolute value, indicating a plausible omitted variable bias in our explanatory variable of interest.

From Table 24, we find that an additional day worked under NREGA by the household increases the number of days in a typical month spent by an adult during the past year

in non-agricultural work by 1.6% (relative to its mean in the sample) while it decreases the time spent pursuing domestic chores by adults by 2% (relative to its mean). We do not find any significant effect on other time-use patterns from this table. However, we only find an increase in the number of hours in a typical day performing non-agricultural work by adults (by 1.4% of its sample mean), with no impact on the number of hours spent in domestic chores or other time-use patterns from Table 25.

For children, we only find an increase in both the number of days in a typical month and the number of hours in a typical day spent performing agricultural work (Tables 26 and 27) with an increase in the number of days of NREGA work performed by the household. An additional day worked under NREGA by the household raises the number of days spent in a typical month in agricultural work by a child by 2.3% and the number of hours in a typical day doing so by 2.6% (relative to their sample means). We do not seem to find any significant effect of NREGA days worked on other time-use patterns for children from these two tables. In Table 28, we find that an additional day worked under NREGA by the household raises the number of hours in a typical day spent by a child caring for others by 1.6% and reduces play/leisure hours by 0.6% (relative to their sample means), with no associated significant influence on other time-use patterns.

5.2.3 Potential Heterogeneity by Gender?

The time-use results motivate us to understand whether there exists any underlying patterns of heterogeneity by gender. In other words, the time-use results we obtained were for the entire sample of individuals—males and females combined. This will not be able to fully illustrate the effect of NREGA days worked on time-use patterns on males and females separately. Tables 31 to 36 report IV estimation results for males and females separately for the working sample, along with first stage results.

From Table 31, we find that greater number of NREGA days worked by the household results in increase in the number of days in a typical month spent by adult women in wage work, non-agricultural work while reducing the time spent in performing domestic chores. However, we do not seem to find any significant effect of NREGA days on time-use patterns for adult men from this table. It is interesting to note that we found no influence on days spent in wage work for the combined sample (Table 24) and our findings days spent performing regarding non-agricultural work and domestic chores from Table 24 appears to be driven by adult women. From Table 32, we find that higher number of NREGA days worked at the household level increases the number of hours in a typical day spent in wage work and non-agricultural work by adult women, with no associated effect for men for any of the time-use patterns. Again, it is to be noted, we did not find

any effect on the hours spent in wage work from the combined sample (Table 25) and our finding regarding hours spent performing non-agricultural work in Table 25 appears to be driven by adult women. While the finding that there is a reduction in the number of days spent performing domestic chores by adult women is interesting and relatively straightforward to understand, the increase in the time spent performing wage work could likely be due to the inclusion of NREGA work as wage work (wage work includes wage work in agriculture as well as non-agriculture, although it does not include NREGA work explicitly).

Tables 33 and 34 show that greater number of NREGA days worked by the household increases the number of days and hours spent by male children respectively performing agricultural work. We do not find any associated effect for male children for other time-use patterns or for female children for any time-use patterns from these tables. Therefore, our findings in Tables 26 and 27 are more likely to be driven by male children.

From Tables 35 and 36, we find that higher number of NREGA days worked raised the number of hours spent in a typical day caring for others and studying outside school for only male children, whereas it is found to decrease the hours spent playing/for leisure for both male and female children; though it is found to reduce leisure time more for boys relative to girls. Once again, we find that although we did not find any significant influence of NREGA days on hours spent studying outside school for the combined sample (Table 28), once we disaggregate the sample by gender of children, we seem to find the required effect for boys and not for girls. On the other hand, the result on the hours spent caring for others in Table 28 appears to be driven by boys, whereas the finding on leisure time from Table 28 seems to be driven by both boys and girls (predominantly for boys in this case). These findings are interesting as we have documented high participation of women in NREGA and reduction of time spent performing domestic chores (days in a typical month) and in which case we would typically expect to see increase in time spent performing chores, caring for others and reduction in time spent in school and leisure largely for girls, if at all. However, we appear to find the reverse of this from Tables 35 and 36. Therefore, NREGA appears to somewhat reduce children's welfare through reduction in leisure time and increased time spent caring for others and performing agricultural work; but it seems to affect boys more relative to girls. At the same time, it is assuring to find that increased time spent by adults, particularly adult women, does not result in increased time spent in paid work, performing domestic chores and in household enterprise by children-both boys and girls.

6 Conclusion

In this paper, we attempt to study the effect of the number of days worked by a household under India's National Rural Employment Guarantee Act (NREGA) on consumption expenditure patterns and individual time-use through the instrumental variables estimation strategy. As NREGA particularly encourages the participation of women, we find increased spending on nutritious items such as milk, proteins, vegetables and fruits along with some "luxury" food items such as salt/spices, sugar and edible oils as well as beverages like tea/coffee and soft drinks; but no effect on the spending on adult goods such as tobacco and alcohol. Further, we also find that households that work a greater number of days under NREGA are more likely to spend on clothing and footwear of girl children. These findings are consistent with the literature that women and men have distinct preferences and are likely to spend their incomes on different commodities, with women more likely to spend on goods that can raise children's welfare and particularly that of female children in the Indian context. In terms of time-use outcomes, we find reduction in the time spent by women performing domestic chores and increase in time spent performing wage and non-agricultural work for households that work a larger number of days under NREGA, with no associated effect for men. However, these findings for adult women do not appear to translate into greater time spent performing chores, caring for others or performing paid work for female children, contrary to our expectation. But, we do find increase in the time spent caring for others, performing agricultural work as well as studying outside school by male children. Leisure/play time is found to be lower for both girls and boys (although it is lowered by a greater extent for boys relative to girls) in households where adults together work for a greater number of days under NREGA. Although the reduction in leisure time for children is somewhat welfare reducing for them, it is reassuring to find that female children do not appear to bear any significant burden of household chores or other activities, that can potentially take their time away from education, on account of greater adult participation in NREGA, particularly that by women.

References

- [1] Afridi, Farzana, Abhiroop Mukhopadhyay and Soham Sahoo, "Female Labour Force Participation and Child Education in India: Evidence from the National Rural Employment Guarantee Scheme," *mimeo*, 2013.

- [2] Afridi, Farzana, Vegard Iversen and M.R.Sharan, “Women Political Leaders, Corruption and Learning: Evidence from a Large Public Program in India,” *International Growth Centre Working Paper*, 2014.
- [3] Anderson, Siwan and Jean-Marie Baland, “The Economics of Roscas and Intra-household Resource Allocation,” *Quarterly Journal of Economics*, 117(3), pp. 963-995, 2002.
- [4] Bose, Nayana, “Raising Consumption through India’s National Rural Employment Guarantee Scheme,” *mimeo*, 2013.
- [5] Doepke, Matthias and Michele Tertilt, “Does Female Empowerment Promote Economic Development,” *mimeo*, 2014.
- [6] Duflo, Esther, “Grandmothers and Granddaughters: Old Age Pension and Intra-Household Allocation in South Africa ,” *World Bank Economic Review*, 17(1), pp. 1-25, 2003.
- [7] Duflo, Esther and Christopher Udry, “Intrahousehold Resource Allocation in Cote d’Ivoire: Social Norms, Separate Accounts and Consumption Choices,” *mimeo*, 2004.
- [8] Dutta, Puja, Rinku Murgai, Martin Ravallion and Dominique Van De Walle “Does India’s Employment Guarantee Scheme Guarantee Employment? ,” *Economic and Political Weekly*, Vol XLVII No 16, 2012.
- [9] Engler, Monika and Shamika Ravi, “Workfare as an Effective Way to Fight Poverty: The Case of India’s NREGS,” *World Development*, forthcoming, pp. 57-71, 2015.
- [10] Gehrke, Esther, “An Employment Guarantee ad Risk Insurance? Assessing the Effects of NREGS on Agricultural Production Decisions,” *BGPE Discussion Paper*, 2014.
- [11] Hoddinott, John and Lawrence Haddad, “Does Female Income Share Influence Household Expenditures? Evidence from Cote d’Ivoire ,” *Oxford Bulletin of Economics and Statistics*, 57(1), pp. 77-96, 1995.
- [12] Imbert, Clement and John Papp, “Labour Market Effects of Social Programs: Evidence from India’s Employment Guarantee,” *American Economic Journal: Applied Economics*, forthcoming.

- [13] Islam, Mahnaz and Anitha Sivasankaran, "How does Child Labor respond to changes in Adult Work Opportunities? Evidence from NREGA," *mimeo*, 2014.
- [14] Khera, Ritika and Nandini Nayak, "Women Workers and Perceptions of the National Rural Employment Guarantee Act," *Economic and Political Weekly*, 44(43), pp. 49-57, October 24-30, 2009.
- [15] Khosla, Rishabh "Caste, Politics and Public Good Distribution in India: Evidence from NREGS in Andhra Pradesh," *Economic and Political Weekly*, XLVI(12), March 19, 2011.
- [16] Liu, Yanyan and Klaus Deininger "Poverty Impacts of India's National Rural Employment Guarantee Scheme: Evidence from Andhra Pradesh," *mimeo*, 2013.
- [17] Maiorano, Diego, "The Politics of the Mahatma Gandhi National Rural Employment Guarantee Act in Andhra Pradesh," *World Development*, 58, pp. 95-105, 2014.
- [18] Mukhopadhyay, Abhiroop, "Mahatma Gandhi National Rural Employment Guarantee Scheme: Falling Demands or Funds Crunch?," *Ideas for India*, August 8 2012.
- [19] Mukhopadhyay, Abhiroop, "The Political Economy of Mahatma Gandhi National Rural Employment Guarantee Scheme," *ESID Working Paper No 15*, 2012.
- [20] Niehaus, Paul and Sandip Sukhtankar, "The Marginal Rate of Corruption in Public Programs: Evidence from India," *Journal of Public Economics*, 104, pp. 52-64, 2012.
- [21] Reddy, Narasimha D., "The Long Road to Social Security: The National Rural Employment Guarantee Scheme in Andhra Pradesh ," *Paper 11, Centre for Development Studies, Trivandrum, Kerala, India*, 2012.

Figures and Tables

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ANNEXURE B-2

PROFORMA SUGGESTED FOR JOB CARD (ii)

Proforma for Job Card
(COVER PAGE)

Registration/Job Card No.
(State Code/District Code/Block Code/G.P.Code/Registration No.)

IDENTITY CARD-CUM- JOB CARD OF THE HOUSEHOLD
SEEKING WAGE EMPLOYMENT UNDER NREGA
VALID FOR FIVE YEARS
FROMTO

Figure 1: Job Card Proforma: Ministry of Rural Development, Government of India

Job Card B-2
(ii)

PARTICULARS

1. Registration Number of the Household:

StateCode/DistrictCode/Block Code/G.P. Code/Village/Family Member

2. Name of the Applicant

3. SC/ST/IAY/LR beneficiary

4. Details of the applicants of the Household willing to work

S.No.	Name	Father's/Husband's Name	Male/ Female	Age on Date of Registration	P.O/Bank A/c No. (if any)	P.O/Bank Code

4. Address

5. Date of Registration:

Photograph(s) of members of
Household willing to work, duly
attested by Sarpanch and
Panchayat Secretary

Signature/Thumb impressions of applicants

Seal & Signature of Registering Authority

Figure 2: Job Card Proforma: Ministry of Rural Development, Government of India

JOB/EMPLOYMENT RECORD

Demand for work Record

S.No.	Date of submission of application for seeking employment	Date from which employment is needed	No. of days

Details of Employment Provided

S.No	Month & Year	Name of Family Member to whom Employment Provided	No. of Days and Dates for which Employment Provided			Details of Work on which Employment Provided	Muster Roll Number by which wages paid	Signature of Authorised Officer
			Date		No. of Days			
			From	To				

- Note:**
- No. Row will be left blank in any case.
 - Monthly totals will be done at the end of Month for number of days of employment provided.
 - Details will be entered separately for separate family member.
 - Accordingly when wage employment of 100 days have been provided to the household, it has to be entered in the next row in red ink.
 - The entries of the next month should immediately start from the next row giving total of previous month.
 - There should be 20 rows available for entries on one page. There must be at least 5 such pages having 20 rows for making entries during the 5 years.

Figure 3: Job Card Proforma: Ministry of Rural Development, Government of India

DETAILS OF UNEMPLOYMENT ALLOWANCE GIVEN

S. No	Date, Month & Year	Name of Family Member to whom Unemployment Allowance given	No. of Days and Dates for which Unemployment Allowance Provided			Rate at which Unemployment Allowance given	Total amount paid	Signature of Authorised Officer
			Date		No. of Days			
			From	To				

Figure 4: Job Card Proforma: Ministry of Rural Development, Government of India

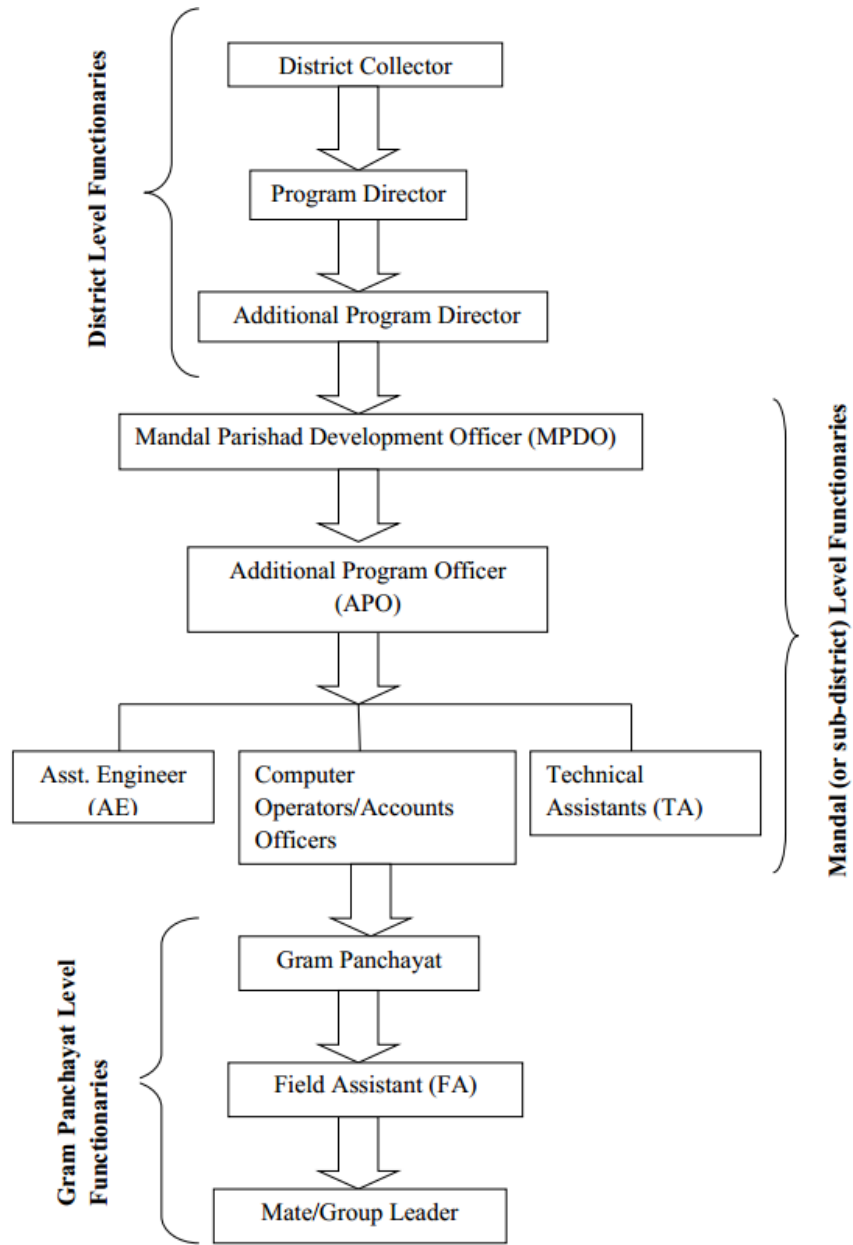


Figure 5: Administration of NREGA in Andhra Pradesh, Courtesy: Afridi, Iversen and Sharan (2014).

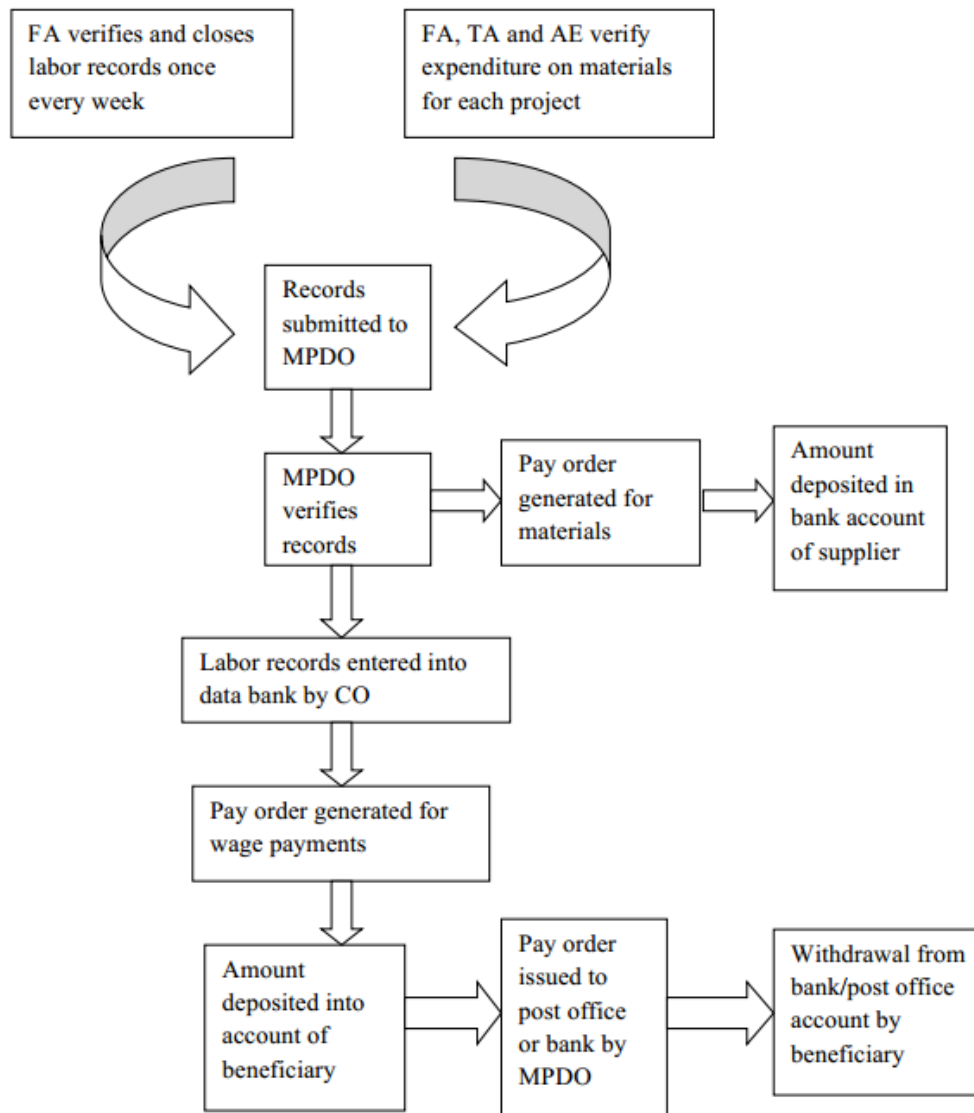


Figure 6: Flow of NREGA Funds in Andhra Pradesh, Courtesy: Afridi, Iversen and Sharan (2014).

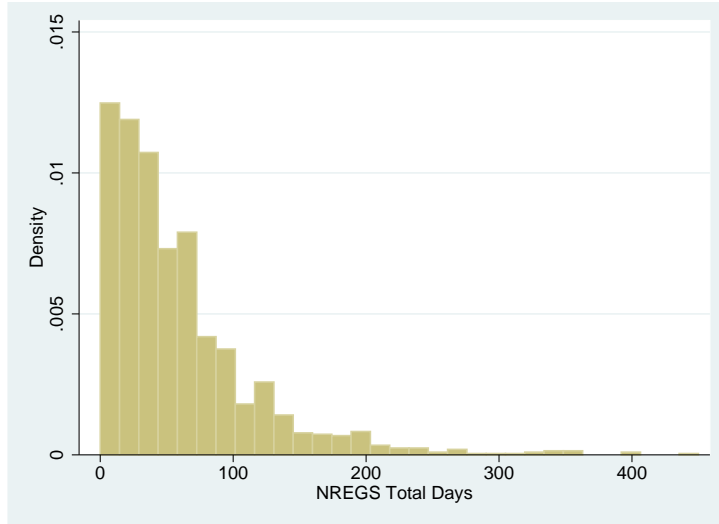


Figure 7: Source: Young Lives Survey, Round 3 (2009)-NREGS Days Worked during 2008-2009 for the Working Sample

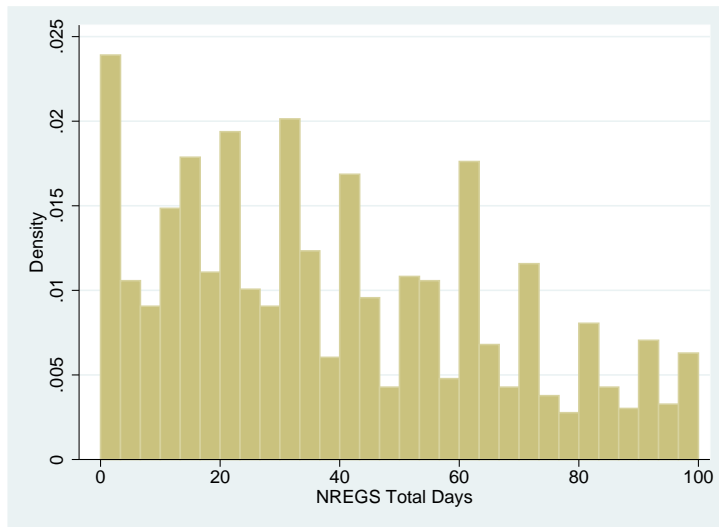


Figure 8: Source: Young Lives Survey, Round 3 (2009)-At Most 100 NREGS Days Worked during 2008-2009 for the Working Sample

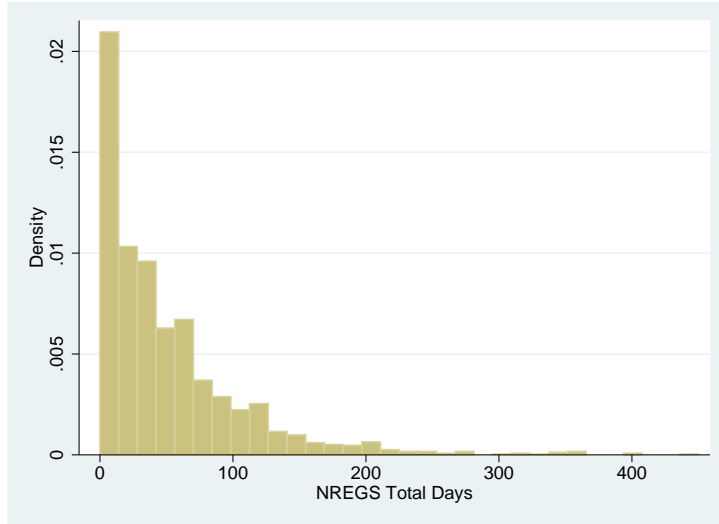


Figure 9: Source: Young Lives Survey, Round 3 (2009)-NREGS Days Worked during 2008-2009 for All Households

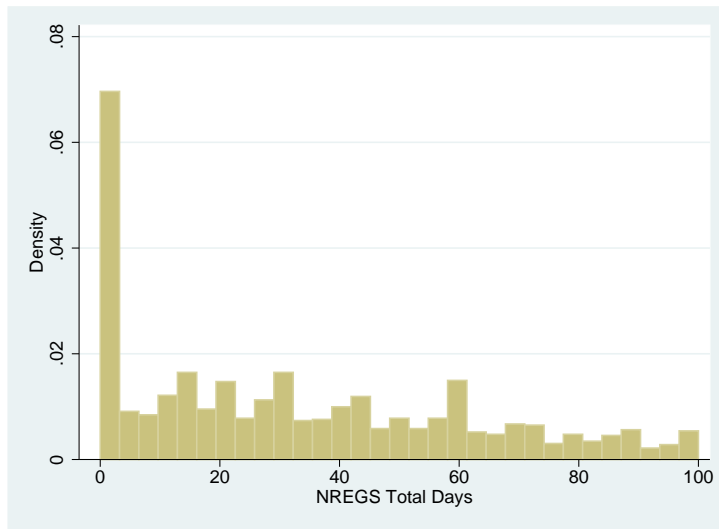


Figure 10: Source: Young Lives Survey, Round 3 (2009)-At Most 100 NREGS Days Worked during 2008-2009 for All Households

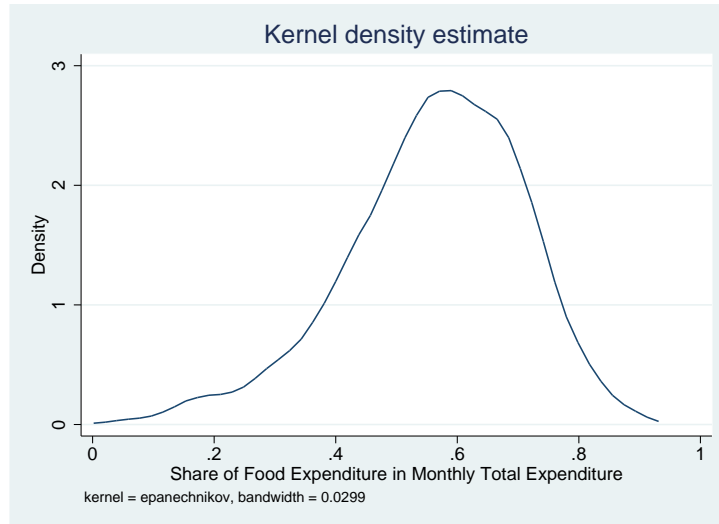


Figure 11: Source: Young Lives Survey, Round 3 (2009)-Share of Food in Total Monthly Expenditure for Working Sample

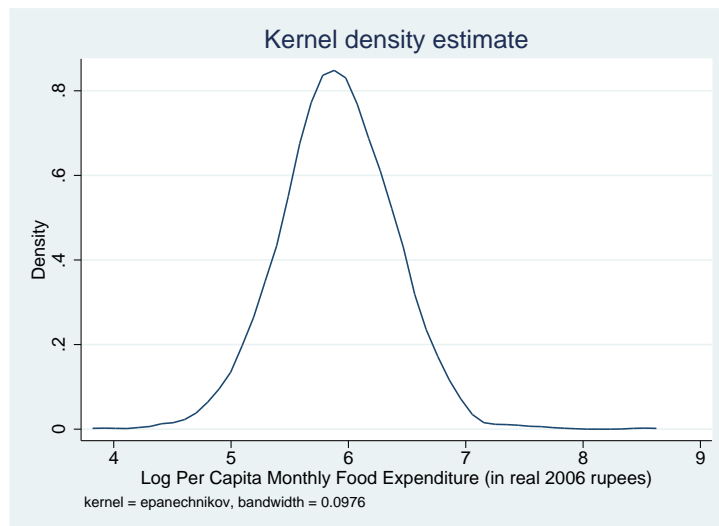


Figure 12: Source: Young Lives Survey, Round 3 (2009)-Log Per Capita Monthly Food Expenditure in Real 2006 Rupees for Working Sample

Table 1: How Important are NREGS Earnings? Descriptive Statistics of Share of Household Earnings by Major Sources: No Crop Income

Sample:	Working Sample			All Households		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Sale of Livestock Products	0.07	0.17	1409	0.07	0.19	1618
Agricultural Wages	0.39	0.32	1409	0.38	0.33	1618
Regular Wages/Salary	0.13	0.27	1409	0.13	0.29	1618
Casual Wages	0.15	0.26	1409	0.15	0.27	1618
NREGS Wages	0.25	0.25	1409	0.22	0.25	1618
Selling Commodities	0.02	0.13	1409	0.04	0.16	1618

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the household level. Share of income computed on the basis of earnings during the reference period of last 12 months. The mean share need not exactly add up to 1 on account of rounding. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. "Obs" refers to the number of observations.

Table 2: How Important are NREGS Earnings? Descriptive Statistics of Share of Household Earnings by Major Sources: With Crop Income

Sample:	Working Sample			All Households		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Sale of Livestock Products	0.05	0.13	1411	0.05	0.14	1626
Agricultural Wages	0.33	0.30	1411	0.32	0.31	1626
Regular Wages/Salary	0.12	0.26	1411	0.13	0.27	1626
Casual Wages	0.13	0.25	1411	0.14	0.26	1626
NREGS Wages	0.19	0.20	1411	0.16	0.20	1626
Selling Commodities	0.02	0.11	1411	0.03	0.15	1626
Crop Income	0.17	0.25	1411	0.17	0.28	1626

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the household level. Share of income computed on the basis of earnings during the reference period of last 12 months. The mean share need not exactly add up to 1 on account of rounding. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. "Obs" refers to the number of observations.

Table 3: How Important are NREGS Earnings? Descriptive Statistics of Share of Household Earnings by Major Sources: With Transfers

Sample:	Working Sample			All Households		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Sale of Livestock Products	0.05	0.12	1413	0.05	0.14	1652
Agricultural Wages	0.31	0.26	1413	0.30	0.27	1652
Regular Wages/Salary	0.11	0.25	1413	0.12	0.26	1652
Casual Wages	0.12	0.23	1413	0.13	0.24	1652
NREGS Wages	0.18	0.18	1413	0.16	0.18	1652
Selling Commodities	0.02	0.11	1413	0.03	0.14	1652
Transfers	0.20	0.16	1413	0.21	0.20	1652

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the household level. Share of income computed on the basis of earnings during the reference period of last 12 months. Transfers include social subsidy, interest on bank account and those from friends/relatives not belonging to the household. The mean share need not exactly add up to 1 on account of rounding. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had worked under NREGS during 2008-09. "Obs" refers to the number of observations.

Table 4: How Important is Buying and Consuming Foods? Descriptive Statistics of Share of Foods Bought and Consumed out of Foods Bought, Consumed out of Own Stock and Received in Transfers

Sample:	Working Sample			All Households		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Share of Rice Bought	0.46	0.41	1410	0.46	0.41	1649
Share of Pulses Bought	0.66	0.37	1354	0.67	0.37	1580
Share of Milk Bought	0.80	0.40	1242	0.81	0.39	1194
Share of Proteins Bought	0.97	0.14	1003	0.97	0.13	1450
Share of Vegetables, Fruits Bought	0.95	0.17	1411	0.95	0.16	1650
Share of Salt/Spices, Oil, Sugar Bought	0.80	0.21	1413	0.80	0.21	1652
Share of Beverages Bought	0.98	0.16	1145	0.97	0.14	1357
Share of Prepared Foods Bought	0.99	0.06	568	0.99	0.06	693
Share of Packaged Sweets Bought	1.00	0.00	902	1.00	0.00	1087
Share of Alcohol Bought	0.98	0.11	628	0.99	0.11	719

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the household level. Specific food items are based on 15 day recall period. Share of each food item is computed as a share of item bought and consumed from what is bought, consumed out of own stock and transfers received by the household. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. "Obs" refers to the number of observations.

Table 5: Descriptive Statistics of Real Per Capita Consumption Expenditure: Foods

Sample:	Working Sample			All Households		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Log Food Expenditure	5.91	0.48	1413	5.92	0.48	1652
Rice	22.60	31.51	1412	23.37	31.88	1651
Pulses	10.15	9.26	1413	10.58	10.63	1652
Milk	7.41	9.34	1410	8.05	10.53	1649
Proteins	24.48	22.58	1395	24.72	22.24	1628
Vegetables and Fruits	30.14	21.12	1411	31.02	21.09	1650
Salt/Spices, Oil and Sugar	24.87	15.59	1413	25.81	17.05	1652
Beverages	5.70	8.55	1404	5.83	8.36	1642
Prepared Foods	3.63	7.69	1411	3.78	7.62	1648
Packaged Sweets	4.39	6.27	1408	4.57	6.23	1646
Alcohol	18.41	39.20	1401	18.18	39.34	1638
Tobacco Products	15.72	23.09	1412	15.75	23.12	1651
Fuel and Light	21.92	25.29	1413	23.10	26.89	1652
Personal Care Items	29.40	26.88	1413	29.45	25.69	1652

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the household level and are computed as real (in 2006 rupees) per capita expenditure. Specific food items are based on 15 day recall period, tobacco products such as cigarettes, fuel and light and personal care items are based on the 30 day recall period. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. "Obs" refers to the number of observations.

Table 6: Descriptive Statistics of Real Consumption Expenditure: Non-Foods

Sample:	Working Sample			All Households		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Rent and Electricity	558.55	879.98	1413	671.12	1261.28	1652
Bribes	108.92	2285.15	1413	119.19	2204.94	1652
Festivals	6338.44	74368.51	1413	6629.24	71636.03	1652
Adult's Clothing	381.47	306.26	1369	398.15	319.09	1596
Adult's Footwear	59.66	44.43	1370	62.73	45.93	1598
Medical Expenditure	659.68	1217.64	1409	756.58	2388.21	1647
If Spent Any on Girl Child's Clothing	0.47	0.50	1413	0.46	0.50	1652
If Spent Any on Girl Child's Footwear	0.46	0.50	1413	0.46	0.50	1652

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the household level and are computed as real (in 2006 rupees) expenditure for rent and electricity, bribes, festivals and as real (in 2006 rupees) per capita for expenditure on medicines, adult's clothing and footwear. If the household spent anything on the girl child's clothing and footwear is with reference to the "index" girl child and they are binary variables that assume the value 1 if household has spent anything at all and is 0 otherwise. All non-food items are recorded on the 12 month recall period. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. "Obs" refers to the number of observations.

Table 7: What are the Major Activities? Descriptive Statistics of Individual Responses about Major Activities

Sample:	Working Sample			All Households		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Self-Employ	0.14	0.35	9473	0.15	0.35	11163
Wage Work	0.21	0.40	9473	0.19	0.40	11163
Agriculture	0.27	0.44	9473	0.26	0.44	11163
Non-Agriculture	0.11	0.31	9473	0.12	0.32	11163
Domestic Chores	0.04	0.19	9473	0.04	0.20	11163
Unpaid Work	0.001	0.03	9473	0.001	0.03	11163
Unemployed	0.0004	0.02	9473	0.0004	0.02	11163
Household Dependent	0.39	0.49	9473	0.40	0.49	11163

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the individual level. Work activities are recorded with respect to individual's reference period of last 12 months. The means may not exactly add up to 1 on account of rounding. All variables are binary variables that assume the value of 1 if the description provided is true and is 0 otherwise. "Self Employ" refers to being self-employed in producing food crops, non-food crops, aquaculture, livestock, manufacturing, services, business or other non-agricultural activities. "Wage Work" refers to wage employment in agriculture and in non-agriculture (but unsalaried). "Agriculture" refers to self-employed in agriculture (crops, livestock, aquaculture), wage employment in agriculture, annual farm servant and other agricultural work. "Non-Agriculture" refers to self-employed in non-agriculture, wage employment in non-agriculture. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. "Obs" refers to the number of observations.

Table 8: Descriptive Statistics of Adult's Time-Use by Major Activity

Sample:	Working Sample			All Adults		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Days in a Typical Month:						
Self-Employ	5.05	9.41	5349	5.23	9.54	6345
Wage Work	6.83	9.93	5349	6.37	9.74	6345
Agriculture	9.03	10.68	5349	8.61	10.59	6345
Non-Agriculture	4.09	8.98	5349	4.32	9.22	6345
Domestic Chores	1.40	5.93	5349	1.58	6.28	6345
Unpaid Work	0.02	0.70	5349	0.02	0.65	6345
Hours in a Typical Day:						
Self-Employ	1.82	3.36	5349	1.88	3.41	6344
Wage Work	2.64	3.77	5349	2.47	3.70	6344
Agriculture	3.39	3.93	5349	3.24	3.91	6345
Non-Agriculture	1.48	3.18	5349	1.54	3.24	6343
Domestic Chores	0.27	1.26	5349	0.31	1.31	6345
Unpaid Work	0.01	0.25	5349	0.01	0.23	6345

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the individual level. Adults include those who are 18 years of age or older. The sample of individuals includes those for whom the each of the respective activities were major activities as well as those for whom each of the respective activities were not major activities. Days in a typical week are from the household's reference period of last 12 months. Hours in a typical day are from the household's reference period of last 12 months. "Self Employ" refers to being self-employed in producing food crops, non-food crops, aquaculture, livestock, manufacturing, services, business or other non-agricultural activities. "Wage Work" refers to wage employment in agriculture and in non-agriculture (but unsalaried). "Agriculture" refers to self-employed in agriculture (crops, livestock, aquaculture), wage employment in agriculture, annual farm servant and other agricultural work. "Non-Agriculture" refers to self-employed in non-agriculture, wage employment in non-agriculture. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. "Obs" refers to the number of observations.

Table 9: Descriptive Statistics of Children’s Time-Use by Major Activity

Sample:	Working Sample			All Children		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Days in a Typical Month:						
Self-Employ	0.49	3.35	4120	0.46	3.24	4814
Wage Work	0.69	3.68	4120	0.64	3.54	4814
Agriculture	0.93	4.42	4120	0.86	4.24	4814
Non-Agriculture	0.42	3.12	4120	0.40	3.04	4814
Domestic Chores	0.38	3.14	4120	0.40	3.20	4814
Unpaid Work	0.03	0.82	4120	0.02	0.80	4814
Hours in a Typical Day:						
Self-Employ	0.18	1.18	4120	0.16	1.13	4814
Wage Work	0.27	1.44	4120	0.25	1.39	4814
Agriculture	0.35	1.62	4120	0.33	1.57	4814
Non-Agriculture	0.15	1.11	4120	0.14	1.07	4814
Domestic Chores	0.08	0.78	4120	0.08	0.79	4814
Unpaid Work	0.01	0.28	4120	0.01	0.26	4814

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the individual level and includes those who are younger than 18 years. Days in a typical week are from the household’s reference period of last 12 months. Hours in a typical day are from the household’s reference period of last 12 months. “Self Employ” refers to being self-employed in producing food crops, non-food crops, aquaculture, livestock, manufacturing, services, business or other non-agricultural activities. “Wage Work” refers to wage employment in agriculture and in non-agriculture (but unsalaried). “Agriculture” refers to self-employed in agriculture (crops, livestock, aquaculture), wage employment in agriculture, annual farm servant and other agricultural work. “Non-Agriculture” refers to self-employed in non-agriculture, wage employment in non-agriculture. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. “Working Sample” consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. “Obs” refers to the number of observations..

Table 10: Descriptive Statistics of Activities that Largely Children Engage In

Sample:	Working Sample			All Children		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Hours in a Typical Day:						
Sleeping	9.00	1.03	2707	8.99	1.02	3176
Caring for Others	0.30	0.68	2706	0.29	0.66	3175
Domestic Tasks	0.66	0.99	2707	0.65	0.98	3176
HH Enterprise	0.29	1.40	2705	0.27	1.36	3174
Paid Work	0.27	1.40	2707	0.24	1.34	3176
In School	6.91	2.48	2706	6.94	2.44	3175
Studying Outside School	1.67	1.28	2707	1.71	1.28	3176
Playing/Leisure	4.87	2.27	2707	4.89	2.26	3176

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the individual level and for those younger than 18 years of age. Hours in a typical day are from the household’s reference period of last 12 months. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. “Working Sample” consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. “Obs” refers to the number of observations..

Table 11: Descriptive Statistics of Household Characteristics: Covariates

Sample:	Working Sample			All Households		
Variable	Mean	Std. Dev.	Obs	Mean	Std. Dev	Obs
Household Size	5.39	2.08	1413	5.43	2.20	1652
If Scheduled Caste	0.25	0.43	1413	0.24	0.43	1652
If Scheduled Tribe	0.17	0.38	1413	0.16	0.36	1652
If Other Backward Class	0.48	0.50	1413	0.50	0.50	1652
If Hindu	0.98	0.15	1413	0.98	0.16	1652
If Muslim	0.01	0.12	1413	0.02	0.13	1652
If Christian	0.01	0.09	1413	0.01	0.08	1652
Land Owned	2.52	16.20	1413	2.65	15.35	1652
Proportion of Literate Adults	0.37	0.35	1413	0.39	0.36	1652
If Access PDS	0.99	0.09	1413	0.98	0.12	1652
Male Household Head	0.93	0.25	1413	0.93	0.25	1651
Age of Household Head	40.31	9.49	1413	40.43	9.64	1650
If Head Lives in HH	0.98	0.15	1413	0.98	0.15	1651
Average Household Age	26.21	6.04	1413	26.30	6.04	1652
Household Age Squared	723.50	332.79	1413	727.96	331.85	1652
Proportion of Males	0.48	0.15	1413	0.48	0.15	1652
Knows Social Audit	0.55	0.50	1413	0.49	0.50	1652
Earnings (no NREGS)	20515.79	26453.97	1413	21484.18	27012.87	1652
Crop Earnings	7317.57	29874.56	1413	7825.05	29752.17	1652

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the household level. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had at least one adult member who had sought work under NREGS during 2008-09. "Obs" refers to the number of observations. The variables "Household Size", "Land Owned", "Proportion of Literate Adults", "Age of Household Head", "Average Household Age", "Household Age Squared", "Proportion of Males", "Earnings (no NREGS)" and "Crop Earnings" are continuous variables; all other variables are binary variables that assume the value of 1 if the description provided is true and assume the value of 0 otherwise. "Land Owned" is reported in acres. Age is reported in years. "Earnings (no NREGS)" is household earnings from sources listed in Table 1, except from NREGS, in real 2006 rupees earned during the household's reference period of the last 12 months. "Crop Earnings" is household earnings from crops in real 2006 rupees earned during the last agricultural year (2008-2009).

Table 12: OLS Results: Outcome Variable is Log Per Capita Real Monthly Food Expenditure

Sample:				
Working Sample				
Variable	(1)	(2)	(3)	(4)
Number of NREGS Days	0.00048*	0.00049*	0.00036	0.00035
	(0.00026)	(0.00027)	(0.00025)	(0.00025)
R-Squared	0.109	0.152	0.360	0.363
Observations	1413	1412	1412	1412
Sample:				
All Households				
Variable	(1)	(2)	(3)	(4)
Number of NREGS Days	0.00022	0.00028	0.00015	0.00013
	(0.00026)	(0.00025)	(0.00024)	(0.00024)
R-Squared	0.095	0.137	0.349	0.354
Observations	1652	1650	1650	1650
Controls:				
Caste Controls	Yes	Yes	Yes	Yes
Religion Controls	Yes	Yes	Yes	Yes
Land Owned	Yes	Yes	Yes	Yes
If Access PDS	Yes	Yes	Yes	Yes
HH Size	Yes	Yes	Yes	Yes
Proportion of Literate Adults	Yes	Yes	Yes	Yes
If Male HH Head	No	Yes	Yes	Yes
If Head Lives in HH	No	Yes	Yes	Yes
HH Head Age	No	Yes	Yes	Yes
Average HH Age	No	Yes	Yes	Yes
Average HH Age Squared	No	Yes	Yes	Yes
Proportion of Males	No	Yes	Yes	Yes
HH Knows Social Audit	No	Yes	Yes	Yes
HH Net Real Income (non-NREGS)	No	No	No	Yes
HH Net Real Crop Income	No	No	No	Yes
Early Districts*t	No	Yes	Yes	Yes
Fixed Effects	No	No	Yes	Yes

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the household level. Robust standard errors clustered at the community level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. "Caste Controls" include dummy variable for Scheduled Caste, Scheduled Tribe, Other Backward Classes; "Religion Controls" include dummy variables for Hindu, Muslim, Christian. "Early Districts*t" is the district-specific number of years since NREGS was operational in that district with reference to 2008-09. Early districts include Anantapur, Kadapa, Karimnagar, Mahbubnagar, Srikakulam. The district of West Godavari first implemented NREGS during 2008-09. "Fixed Effects" include district, region, sub-district/block and community(village) fixed effects. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09.

Table 13: OLS Results: Outcome Variable is Per Capita Real Spending on Different Foods

Sample:		Working Sample				
Variable	Rice	Pulses	Milk	Proteins	Veg-Fruits	
Number of NREGS Days	0.0376** (0.0169)	0.0037 (0.0047)	-0.0020 (0.0049)	-0.0157 (0.0109)	-0.0032 (0.0092)	
R-Squared	0.209	0.212	0.181	0.189	0.401	
Observations	1411	1412	1409	1394	1410	
Sample:		All Households				
Variable	Rice	Pulses	Milk	Proteins	Veg-Fruits	
Number of NREGS Days	0.0249 (0.0155)	-0.001 (0.0053)	-0.0088* (0.0047)	-0.0190* (0.0098)	-0.0082 (0.0085)	
R-Squared	0.204	0.190	0.180	0.178	0.403	
Observations	1649	1650	1647	1626	1648	
Variable	Salt,Sugar,Oil	Beverages	Alcohol	Tobacco		
Number of NREGS Days	-0.0085 (0.0084)	0.00011 (0.0039)	-0.0300** (0.0130)	0.0025 (0.0095)		
R-Squared	0.303	0.196	0.132	0.154		
Observations	1650	1640	1636	1649		

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell represents a separate regression. "Proteins" include fish,meat and eggs; "Beverages" include tea/coffee and soft drinks Expenditure on all food items (in real 2006 rupees) except tobacco products are on a 15 day recall period, expenditure on tobacco products (in real 2006 rupees) is on a 30 day recall period. All observations are at the household level. Robust standard errors clustered at the community level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is as in Column(4) of Table 13. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09.

Table 14: OLS Results: Outcome Variable is Per Capita Real Spending on Different Non-Food Items

Sample:		Working Sample		
Variable	Rent,Electricity	Adult Clothing	Adult Footwear	
Number of NREGS Days	-0.349 (0.363)	0.154 (0.281)	0.0014 (0.0265)	
R-Squared	0.231	0.310	0.376	
Observations	1412	1368	1369	
Variable	Medical	If Spent on Girl Child Clothing	If Spent on Girl Child Footwear	
Number of NREGS Days	-0.310 (1.022)	0.0001 (0.0002)	-0.00002 (0.0002)	
R-Squared	0.120	0.337	0.309	
Observations	1408	1412	1412	
Sample:		All Households		
Variable	Rent,Electricity	Adult Clothing	Adult Footwear	
Number of NREGS Days	-1.344*** (0.430)	0.0454 (0.263)	-0.0156 (0.0248)	
R-Squared	0.196	0.291	0.385	
Observations	1650	1594	1596	
Variable	Medical	If Spent on Girl Child Clothing	If Spent on Girl Child Footwear	
Number of NREGS Days	-1.039 (1.162)	0.0002 (0.0002)	-0.00003 (0.0002)	
R-Squared	0.117	0.322	0.294	
Observations	1645	1650	1650	

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell represents a separate regression. All outcome variables on non-food expenditures are expressed in per capita spending in real 2006 rupees and are based on a 12 month recall period. "If Spent on Girl Child Clothing (Footwear)" is a binary variable which assumes the value 1 if the household has spent any proportion of its budget on female children's clothing (footwear) on the index child and is 0 otherwise. All other variables are continuous variables. All observations are at the household level. Robust standard errors clustered at the community level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is as in Column(5) of Table 13. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09.

Table 15: OLS Results: Outcome Variable is Number of Days Per Month an Adult Spends Doing this Major Activity

Sample:		Working Sample		
Variable	Self-Employed	Wage Work	Agricultural Work	
Number of NREGS Days	-0.0084** (0.0036)	0.0167*** (0.0040)	0.0040 (0.0040)	
R-Squared	0.205	0.180	0.155	
Observations	3934	3934	3934	
Variable		Non-Agricultural Work	Domestic Chores	Unpaid Act
Number of NREGS Days	0.0036 (0.0037)	-0.0022 (0.0016)	-0.0002 (0.0001)	
R-Squared	0.148	0.105	0.027	
Observations	3934	3934	3934	
Sample:		All Households		
Variable	Self-Employed	Wage Work	Agricultural Work	
Number of NREGS Days	-0.0096*** (0.0035)	0.0202*** (0.0038)	0.0089** (0.0037)	
R-Squared	0.194	0.185	0.158	
Observations	4678	4678	4678	
Variable		Non-Agricultural Work	Domestic Chores	Unpaid Act
Number of NREGS Days	0.0007 (0.0035)	-0.0044*** (0.0015)	-0.0001 (0.0001)	
R-Squared	0.151	0.114	0.023	
Observations	4678	4678	4678	

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell represents a separate regression. Individual's reference period for work activities is based on 12 month recall period. All observations are at the individual level. Adults are 18 years of age or older. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is as in Column(4) of Table 12. Further a dummy for whether the individual is female, is literate and age in years are included as controls. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09.

Table 16: OLS Results: Outcome Variable is Number of Hours in a Typical Day an Adult Spends Doing this Major Activity

Sample:		Working Sample		
Variable	Self-Employed	Wage Work	Agricultural Work	
Number of NREGS Days	-0.0029** (0.0013)	0.0060*** (0.0015)	0.0016 (0.0014)	
R-Squared	0.221	0.182	0.170	
Observations	3934	3934	3934	
Variable	Non-Agricultural Work	Domestic Chores	Unpaid Act	
Number of NREGS Days	0.0015 (0.0013)	-0.0006 (0.0004)	-0.0001 (0.00004)	
R-Squared	0.153	0.094	0.028	
Observations	3934	3934	3934	
Sample:		All Households		
Variable	Self-Employed	Wage Work	Agricultural Work	
Number of NREGS Days	-0.0032*** (0.0012)	0.0074*** (0.0014)	0.0034** (0.0014)	
R-Squared	0.208	0.188	0.174	
Observations	4677	4677	4678	
Variable	Non-Agricultural Work	Domestic Chores	Unpaid Act	
Number of NREGS Days	0.0006 (0.0012)	-0.0010*** (0.0004)	-0.00005 (0.00004)	
R-Squared	0.153	0.102	0.024	
Observations	4676	4678	4678	

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell represents a separate regression. Individual's reference period for work activities is based on 12 month recall period. All observations are at the individual level. Adults are 18 years of age or older. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is as in Column(4) of Table 12. Further a dummy for whether the individual is female, is literate and age in years are included as controls. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09.

Table 17: OLS Results: Outcome Variable is Number of Days Per Month a Child Spends Doing this Major Activity

Sample:		Working Sample		
Variable	Self-Employed	Wage Work	Agricultural Work	
Number of NREGS Days	0.00007 (0.0014)	-0.0008 (0.0011)	0.0008 (0.0015)	
R-Squared	0.078	0.108	0.117	
Observations	3838	3838	3838	
Variable	Non-Agricultural Work	Domestic Chores	Unpaid Act	
Number of NREGS Days	-0.0020** (0.0009)	0.0030** (0.0013)	-0.0001 (0.0001)	
R-Squared	0.108	0.065	0.030	
Observations	3838	3838	3838	
Sample:		All Households		
Variable	Self-Employed	Wage Work	Agricultural Work	
Number of NREGS Days	0.00016 (0.0012)	-0.0003 (0.0010)	0.0015 (0.0013)	
R-Squared	0.073	0.103	0.113	
Observations	4494	4494	4494	
Variable	Non-Agricultural Work	Domestic Chores	Unpaid Act	
Number of NREGS Days	-0.0019** (0.0008)	0.0022* (0.0012)	-0.00003 (0.0001)	
R-Squared	0.093	0.064	0.025	
Observations	4494	4494	4494	

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell represents a separate regression. Individual's reference period for work activities is based on 12 month recall period. All observations are at the individual level. Children are those who are younger than 18 years. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is as in Column(4) of Table 12. Further a dummy for whether the individual is female and age in years are included as controls. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09.

Table 18: OLS Results: Outcome Variable is Number of Hours in a Typical Day a Child Spends Doing this Major Activity

Sample:		Working Sample		
Variable	Self-Employed	Wage Work	Agricultural Work	
Number of NREGS Days	0.00004 (0.0004)	-0.0003 (0.0004)	0.0003 (0.0005)	
R-Squared	0.079	0.109	0.120	
Observations	3838	3838	3838	
Sample:		All Households		
Variable	Self-Employed	Wage Work	Agricultural Work	
Number of NREGS Days	0.00004 (0.0004)	-0.0002 (0.0004)	0.0005 (0.0005)	
R-Squared	0.075	0.104	0.116	
Observations	4494	4494	4494	
Variable	Non-Agricultural Work	Domestic Chores	Unpaid Act	
Number of NREGS Days	-0.0007** (0.0003)	0.0005* (0.0003)	-0.00002 (0.00005)	
R-Squared	0.110	0.058	0.031	
Observations	3838	3838	3838	
Sample:		All Households		
Variable	Self-Employed	Wage Work	Agricultural Work	
Number of NREGS Days	0.00004 (0.0004)	-0.0002 (0.0004)	0.0005 (0.0005)	
R-Squared	0.075	0.104	0.116	
Observations	4494	4494	4494	
Variable	Non-Agricultural Work	Domestic Chores	Unpaid Act	
Number of NREGS Days	-0.0007** (0.0003)	0.0003 (0.0002)	-0.0000001 (0.00004)	
R-Squared	0.096	0.057	0.026	
Observations	4494	4494	4494	

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell represents a separate regression. Individual's reference period for work activities is based on 12 month recall period. All observations are at the individual level. Children are those who are younger than 18 years. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is as in Column(4) of Table 12. Further a dummy for whether the individual is female and age in years are included as controls. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09.

Table 19: OLS Results: Outcome Variable is Number of Hours in a Typical Day a Child Spends Doing Activities that Children Largely Perform

Sample:		Working Sample			
Variable	Sleeping	Caring for Others	Domestic Task	HH Enterprise	
Number of NREGS Days	-0.0001 (0.0004)	0.0002 (0.0003)	0.0008** (0.0004)	0.0002 (0.0006)	
R-Squared	0.287	0.159	0.251	0.140	
Observations	2704	2703	2704	2702	
Sample:		All Households			
Variable	Sleeping	Caring for Others	Domestic Task	HH Enterprise	
Number of NREGS Days	-0.0002 (0.0004)	0.0003 (0.0003)	0.0008** (0.0003)	0.0004 (0.0006)	
R-Squared	0.283	0.152	0.261	0.132	
Observations	3171	3170	3171	3169	
Variable	Paid Work	In School	Studying Outside School	Playing/Leisure	
Number of NREGS Days	0.0005 (0.0006)	0.0007 (0.001)	-0.0001 (0.0006)	-0.0020** (0.0009)	
R-Squared	0.117	0.149	0.209		
Observations	2704	2703	2704		
Sample:		All Households			
Variable	Sleeping	Caring for Others	Domestic Task	HH Enterprise	
Number of NREGS Days	-0.0002 (0.0004)	0.0003 (0.0003)	0.0008** (0.0003)	0.0004 (0.0006)	
R-Squared	0.283	0.152	0.261	0.132	
Observations	3171	3170	3171	3169	
Variable	Paid Work	In School	Studying Outside School	Playing/Leisure	
Number of NREGS Days	0.0007 (0.0005)	0.0007 (0.0009)	-0.0005 (0.0005)	-0.0019** (0.0009)	
R-Squared	0.112	0.137	0.256	0.191	
Observations	3171	3170	3171	3171	

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell represents a separate regression. Individual's reference period for work activities is based on 12 month recall period. All observations are at the individual level. Children are those who are younger than 18 years. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is as in Column(4) of Table 12. Further a dummy for whether the individual is female and age in years are included as controls. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09.

Table 20: Do Household Characteristics Determine Whether a Household Gets Employment on Time under NREGS? Plausible Conditional Exogeneity

Variable	(1)	(2)	(3)
If Position Held	-0.0926 (0.2443)	0.0894 (0.2865)	0.0815 (0.2883)
Years Position Held	0.0198 (0.0293)	0.0238 (0.0320)	0.0209 (0.0316)
If Group Member	0.0940 (0.2833)	-0.2621 (0.3445)	-0.2778 (0.3453)
Attend Frequent Meeting	-0.1219 (0.2759)	0.2036 (0.3369)	0.2114 (0.3377)
Group Leader	0.1753 (0.1185)	0.0950 (0.1481)	0.0989 (0.1468)
Land Owned (acres)			0.0112 (0.0115)
HH is SC			0.2230 (0.1735)
HH is ST			0.3254 (0.2490)
HH is OBC			0.2645* (0.1422)
If HH Head is Male			-0.1037 (0.1590)
HH Head Age			-0.0028 (0.0042)
Proportion Males in HH			-0.1620 (0.2531)
Fixed Effects	No	Yes	Yes
Observations	1464	1275	1273
Wald Test for Joint Significance	3.07	2.81	7.74

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each column is a separate regression. The variables such as positions held (political/apolitical), group membership (self-help groups, cooperative societies) are from Round 2 of the Young Lives Survey (2007). The outcome variable is a binary variable that assumes the value 1 if the household was provided with work under NREGS within 15 days of registration and is 0 otherwise. Probit estimation results are reported. "Fixed Effects" imply region, district, sub-district/block and community(village) fixed effects. All observations are at the household level. Robust standard errors clustered at the community level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and who have had atleast one adult member who had sought work under NREGS during 2008-09. The Wald Test is performed by excluding the fixed effects.

Table 21: IV Results: Outcome Variable is Log Per Capita Real Monthly Food Expenditure

Panel A: IV Results	(1)	(2)	(3)	(4)
Variable				
Number of NREGS Days	0.0057*** (0.0022)	0.0094*** (0.0026)	0.0073** (0.0033)	0.0075** (0.0034)
Observations	1412	1411	1411	1411
Panel B: First-Stage	(1)	(2)	(3)	(4)
Dep Variable: Number of NREGS Days				
If Got Work on Time	17.52*** (3.03)	16.71*** (2.98)	12.18*** (3.07)	11.65*** (3.05)
F-Stat on excluded instrument	30.52	29.02	15.88	15.33
Observations	1412	1411	1411	1411
Controls:				
Caste Controls	Yes	Yes	Yes	Yes
Religion Controls	Yes	Yes	Yes	Yes
Land Owned	Yes	Yes	Yes	Yes
If Access PDS	Yes	Yes	Yes	Yes
HH Size	Yes	Yes	Yes	Yes
Proportion of Literate Adults	Yes	Yes	Yes	Yes
If Male HH Head	No	Yes	Yes	Yes
If Head Lives in HH	No	Yes	Yes	Yes
HH Head Age	No	Yes	Yes	Yes
Average HH Age	No	Yes	Yes	Yes
Average HH Age Squared	No	Yes	Yes	Yes
Proportion of Males	No	Yes	Yes	Yes
HH Knows Social Audit	No	Yes	Yes	Yes
HH Net Real Income (non-NREGS)	No	No	No	Yes
HH Net Real Crop Income	No	No	No	Yes
Early Districts*t	No	Yes	Yes	Yes
Fixed Effects	No	No	Yes	Yes

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). All observations are at the household level. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the community level are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level of significance respectively. "Caste Controls" include dummy variable for Scheduled Caste, Scheduled Tribe, Other Backward Classes; "Religion Controls" include dummy variables for Hindu, Muslim, Christian. "Early Districts*t" is the district-specific number of years since NREGS was operational in that district with reference to 2008-09. Early districts include Anantapur, Kadapa, Karimnagar, Mahabubnagar, Srikakulam. The district of West Godavari first implemented NREGS during 2008-09. "Fixed Effects" include district, region, sub-district/block and community(village) fixed effects. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09.

Table 22: IV Results: Outcome Variable is Per Capita Real Spending on Different Foods

Panel A: IV Results	(1)	(2)	(3)	(4)	(5)
Variable	Rice	Pulses	Milk	Proteins	Veg-Fruits
Number of NREGS Days	0.028 (0.162)	0.052 (0.056)	0.171** (0.073)	0.323* (0.170)	0.412*** (0.152)
Observations	1410	1411	1408	1393	1409
Panel B: First-Stage	(1)	(2)	(3)	(4)	
Dep Variable: Number of NREGS Days					
If Got Work on Time	17.52*** (3.03)	11.65*** (3.05)	11.60*** (3.06)	11.36*** (3.07)	11.70*** (3.04)
F-Stat on excluded instrument	15.15	15.33	15.11	14.12	15.51
Observations	1410	1411	1408	1393	1409
Panel C: IV Results	(6)	(7)	(8)	(9)	
Variable	Salt,Sugar,Oil	Beverages	Alcohol	Tobacco	
Number of NREGS Days	0.302*** (0.116)	0.176** (0.074)	-0.038 (0.177)	-0.024 (0.102)	
Observations	1411	1402	1399	1410	
Panel D: First-Stage	(6)	(7)	(8)	(9)	
Dep Variable: Number of NREGS Days					
If Got Work on Time	11.65*** (3.05)	11.83*** (3.10)	11.72*** (3.06)	11.76*** (3.07)	
F-Stat on excluded instrument	15.33	15.64	15.32	15.39	
Observations	1411	1402	1399	1410	

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell in Panels A and C represents a different regression. Each column of Panel B(D) is the first-stage regression for the corresponding column of Panel A(C). All observations are at the household level. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the community level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is the same as Column (4) of Table 21. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. See Table Notes of Table 13 for definition of the outcome variables.

Table 23: IV Results: Outcome Variable is Per Capita Real Spending on Different Non-Food Items

Panel A: IV Results			
Variable	(1) Rent,Electricity	(2) Adult Clothing	(3) Adult Footwear
Number of NREGS Days	-8.109** (4.083)	1.640 (1.855)	0.596** (0.283)
Observations	1411	1367	1368
Panel B: First-Stage			
Dep Variable: Number of NREGS Days	(1)	(2)	(3)
If Got Work on Time	11.65*** (3.05)	12.22*** (3.19)	12.30*** (3.16)
F-Stat on excluded instrument	15.33	15.77	16.13
Observations	1411	1367	1368
Panel C: IV Results			
Variable	(4) Medical	(5) Girl Child Clothing	(6) Girl Child Footwear
Number of NREGS Days	20.37** (10.17)	0.008** (0.003)	0.007** (0.003)
Observations	1407	1411	1411
Panel D: First-Stage			
Dep Variable: Number of NREGS Days	(4)	(5)	(6)
If Got Work on Time	11.72*** (3.07)	11.65*** (3.06)	11.65*** (3.05)
F-Stat on excluded instrument	15.39	15.33	15.33
Observations	1407	1411	1411

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell in Panels A and C represents a different regression. Each column of Panel B(D) is the first-stage regression for the corresponding column of Panel A(C). All observations are at the household level. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the community level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is the same as Column (4) of Table 21. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. See Table Notes of Table 14 for definition of the outcome variables.

Table 24: IV Results: Outcome Variable is Number of Days Per Month an Adult Spends Doing the Major Activity

Panel A: IV Results			
Variable	(1) Self-Employ	(2) Wage Work	(3) Agricultural Work
Number of NREGS Days	0.0115 (0.0277)	0.0336 (0.0282)	0.0128 (0.0279)
Observations	3931	3931	3931
Panel B: First-Stage			
Dep Variable: Number of NREGS Days	(1)	(2)	(3)
If Got Work on Time	15.47*** (3.60)	15.47*** (3.60)	15.47*** (3.60)
F-Stat on excluded instrument	19.32	19.32	19.32
Observations	3931	3931	3931
Panel C: IV Results			
Variable	(4) Non-Agricultural Work	(5) Domestic Chores	(6) Unpaid Act
Number of NREGS Days	0.0678** (0.0292)	-0.0323** (0.0152)	-0.0030 (0.0018)
Observations	3931	3931	3931
Panel D: First-Stage			
Dep Variable: Number of NREGS Days	(4)	(5)	(6)
If Got Work on Time	15.47*** (3.60)	15.47*** (3.60)	15.47*** (3.60)
F-Stat on excluded instrument	19.32	19.32	19.32
Observations	3931	3931	3931

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell in Panels A and C represents a different regression. Each column of Panel B(D) is the first-stage regression for the corresponding column of Panel A(C). All observations are at the individual level. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is the same as Column (4) of Table 21. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. See Table Notes of Table 15 for definition of the outcome variables.

Table 25: IV Results: Outcome Variable is Number of Hours in a Typical Day an Adult Spends Doing the Major Activity

Panel A: IV Results			
Variable	(1) Self-Employ	(2) Wage Work	(3) Agricultural Work
Number of NREGS Days	0.0050 (0.0097)	0.0059 (0.0102)	0.0005 (0.0098)
Observations	3931	3931	3931
Panel B: First-Stage			
Dep Variable: Number of NREGS Days	(1)	(2)	(3)
If Got Work on Time	15.47*** (3.60)	15.47*** (3.60)	15.47*** (3.60)
F-Stat on excluded instrument	19.32	19.32	19.32
Observations	3931	3931	3931
Panel C: IV Results			
Variable	(4) Non-Agricultural Work	(5) Domestic Chores	(6) Unpaid Act
Number of NREGS Days	0.0221** (0.0100)	-0.0041 (0.0033)	-0.0011 (0.0007)
Observations	3931	3931	3931
Panel D: First-Stage			
Dep Variable: Number of NREGS Days	(4)	(5)	(6)
If Got Work on Time	15.47*** (3.60)	15.47*** (3.60)	15.47*** (3.60)
F-Stat on excluded instrument	19.32	19.32	19.32
Observations	3931	3931	3931

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell in Panels A and C represents a different regression. Each column of Panel B(D) is the first-stage regression for the corresponding column of Panel A(C). All observations are at the individual level. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is the same as Column (4) of Table 21. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. See Table Notes of Table 16 for definition of the outcome variables.

Table 26: IV Results: Outcome Variable is Number of Days Per Month a Child Spends Doing the Major Activity

Panel A: IV Results			
Variable	(1) Self-Employ	(2) Wage Work	(3) Agricultural Work
Number of NREGS Days	0.0048 (0.0082)	0.0105 (0.0104)	0.0217* (0.0127)
Observations	3835	3835	3835
Panel B: First-Stage			
Dep Variable: Number of NREGS Days	(1)	(2)	(3)
If Got Work on Time	13.47*** (3.48)	13.47*** (3.48)	13.47*** (3.48)
F-Stat on excluded instrument	15.75	15.75	15.75
Observations	3931	3931	3931
Panel C: IV Results			
Variable	(4) Non-Agricultural Work	(5) Domestic Chores	(6) Unpaid Act
Number of NREGS Days	0.0068 (0.0081)	-0.0058 (0.0108)	0.0003 (0.0020)
Observations	3835	3835	3835
Panel D: First-Stage			
Dep Variable: Number of NREGS Days	(4)	(5)	(6)
If Got Work on Time	13.47*** (3.48)	13.47*** (3.48)	13.47*** (3.48)
F-Stat on excluded instrument	15.75	15.75	15.75
Observations	3931	3931	3931

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell in Panels A and C represents a different regression. Each column of Panel B(D) is the first-stage regression for the corresponding column of Panel A(C). All observations are at the individual level. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is the same as Column (4) of Table 21. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. See Table Notes of Table 17 for definition of the outcome variables.

Table 27: IV Results: Outcome Variable is Number of Hours in a Typical Day a Child Spends Doing the Major Activity

Panel A: IV Results			
Variable	(1) Self-Employ	(2) Wage Work	(3) Agricultural Work
Number of NREGS Days	0.0023 (0.0029)	0.0036 (0.0040)	0.0090* (0.0048)
Observations	3835	3835	3835
Panel B: First-Stage			
Dep Variable: Number of NREGS Days	(1)	(2)	(3)
If Got Work on Time	13.47*** (3.48)	13.47*** (3.48)	13.47*** (3.48)
F-Stat on excluded instrument	15.75	15.75	15.75
Observations	3835	3835	3835
Panel C: IV Results			
Variable	(4) Non-Agricultural Work	(5) Domestic Chores	(6) Unpaid Act
Number of NREGS Days	0.0005 (0.0030)	-0.0006 (0.0026)	0.00002 (0.0007)
Observations	3835	3835	3835
Panel D: First-Stage			
Dep Variable: Number of NREGS Days	(4)	(5)	(6)
If Got Work on Time	13.47*** (3.48)	13.47*** (3.48)	13.47*** (3.48)
F-Stat on excluded instrument	15.75	15.75	15.75
Observations	3835	3835	3835

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell in Panels A and C represents a different regression. Each column of Panel B(D) is the first-stage regression for the corresponding column of Panel A(C). All observations are at the individual level. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is the same as Column (4) of Table 21. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. See Table Notes of Table 18 for definition of the outcome variables.

Table 28: IV Results: Outcome Variable is Number of Hours in a Typical Day for a Child's Activity

Panel A: IV Results				
Variable	(1)	(2)	(3)	(4)
	Sleeping	Caring Others	Domestic Tasks	HH Enterprise
Number of NREGS Days	-0.001 (0.004)	0.005* (0.003)	0.002 (0.003)	0.006 (0.005)
Observations	2704	2703	2704	2702
Panel B: First-Stage				
Dep Variable: Number of NREGS Days	(1)	(2)	(3)	(4)
If Got Work on Time	12.26*** (3.55)	12.25*** (3.55)	12.27*** (3.55)	12.29*** (3.55)
F-Stat on excluded instrument	12.78	12.73	12.78	12.84
Observations	2704	2703	2704	2702
Panel C: IV Results				
Variable	(5)	(6)	(7)	(8)
	Paid Work	School	Study Outside School	Playing/Leisure
Number of NREGS Days	0.001 (0.005)	0.011 (0.009)	0.009 (0.006)	-0.034*** (0.012)
Observations	2704	2703	2704	2704
Panel D: First-Stage				
Dep Variable: Number of NREGS Days	(5)	(6)	(7)	(8)
If Got Work on Time	12.26*** (3.55)	12.26*** (3.56)	12.27*** (3.55)	12.27*** (3.55)
F-Stat on excluded instrument	12.78	12.73	12.78	12.78
Observations	2704	2703	2704	2704

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell in Panels A and C represents a different regression. Each column of Panel B(D) is the first-stage regression for the corresponding column of Panel A(C). All observations are at the individual level. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the household level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is the same as Column (4) of Table 21. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. See Table Notes of Table 19 for definition of the outcome variables.

Table 29: IV Results for Potential Heterogeneous Impact: Outcome Variable is Per Capita Real Spending on Different Foods

Panel A: IV Results	(1)	(2)	(3)	(4)	(5)
Variable	Rice	Pulses	Milk	Proteins	Veg-Fruits
NREGS Days*Women	0.049 (0.398)	0.121 (0.140)	0.397** (0.190)	0.781* (0.427)	0.967** (0.390)
Women	-1.733 (11.84)	-2.736 (4.185)	-12.72** (5.530)	-20.96 (13.38)	-29.56** (12.07)
Observations	1404	1405	1402	1388	1403
Panel B: First-Stage	(1)	(2)	(3)	(4)	
Dep Variable: NREGS Days*Women					
If Got Work on Time	4.77*** (1.55)	4.82*** (1.55)	4.78*** (1.55)	4.67*** (1.56)	4.84*** (1.54)
F-Stat on excluded instrument	11.77	12.02	11.84	11.04	12.16
Observations	1404	1411	1402	1388	1403
Panel C: IV Results	(6)	(7)	(8)	(9)	
Variable	Salt,Sugar,Oil	Beverages	Alcohol	Tobacco	
NREGS Days*Women	0.722** (0.305)	0.431** (0.184)	-0.017 (0.431)	-0.061 (0.239)	
Women	-19.91** (9.210)	-12.71** (5.990)	-1.014 (13.16)	-2.918 (8.389)	
Observations	1405	1396	1394	1404	
Panel D: First-Stage	(6)	(7)	(8)	(9)	
Dep Variable: NREGS Days*Women					
If Got Work on Time	4.82*** (1.55)	4.86*** (1.57)	4.83*** (1.55)	4.89*** (1.56)	
F-Stat on excluded instrument	12.02	11.95	12.08	12.14	
Observations	1405	1396	1394	1404	

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell in Panels A and C represents a different regression. Each column of Panel B(D) is the first-stage regression for the corresponding column of Panel A(C). All observations are at the household level. "Women" is the proportion of women participants in NREGS from the household. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the community level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is the same as Column (4) of Table 21. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. See Table Notes of Table 13 for definition of the outcome variables.

Table 30: IV Results for Potential Heterogeneous Impact: Outcome Variable is Per Capita Real Spending on Different Non-Food Items

Panel A: IV Results			
Variable	(1) Rent,Electricity	(2) Adult Clothing	(3) Adult Footwear
NREGS Days*Women	-20.11** (9.983)	3.807 (4.558)	1.366* (0.717)
Women	709.6* (373.1)	-67.40 (132.5)	-42.68** (21.05)
Observations	1405	1361	1362
Panel B: First-Stage			
Dep Variable: NREGS Days*Women	(1)	(2)	(3)
If Got Work on Time	4.82*** (1.55)	5.12*** (1.62)	5.18*** (1.60)
F-Stat on excluded instrument	12.02	12.68	13.20
Observations	1405	1361	1362
Panel C: IV Results			
Variable	(4) Medical	(5) Girl Child Clothing	(6) Girl Child Footwear
NREGS Days*Women	51.60** (25.38)	0.018** (0.009)	0.0163* (0.009)
Women	-1415.9* (802.9)	-0.674*** (0.257)	-0.584** (0.257)
Observations	1401	1405	1405
Panel D: First-Stage			
Dep Variable: NREGS Days*Women	(4)	(5)	(6)
If Got Work on Time	4.86*** (1.56)	4.82*** (1.55)	4.82*** (1.55)
F-Stat on excluded instrument	12.09	12.02	12.02
Observations	1401	1405	1405

Note: Data source is the Round 3 of the Young Lives Survey (2009-2010). Each cell in Panels A and C represents a different regression. Each column of Panel B(D) is the first-stage regression for the corresponding column of Panel A(C). All observations are at the household level. "Women" is the proportion of women participants in NREGS from the household. "If Got Work on Time" is a dummy variable that assumes the value 1 if the household was provided with employment under NREGS within 15 days of registration and is 0 otherwise. Robust standard errors clustered at the community level are in parentheses. ***, ** and * indicate statistical significance at the 1% , 5% and 10% level of significance respectively. Regression specification is the same as Column (4) of Table 21. Sample contains rural households (excluding district of Hyderabad) who have not moved since 2007 and for whom number of days worked under NREGS was available. "Working Sample" consists of rural households (excluding district of Hyderabad) who have not moved since 2007, for whom number of days worked under NREGS was available and who have had atleast one adult member who had sought work under NREGS during 2008-09. See Table Notes of Table 14 for definition of the outcome variables.

Table 31: IV Results for Potential Differential Effects: Outcome Variable is Number of Days Per Month an Adult Spends Doing a Major Activity

Panel A: IV Results	Women	Men
Variable	Self-Employ	Self-Employ
NREGS Days	0.0006 (0.0307)	0.0288 (0.0352)
Variable	Wage Work	Wage Work
NREGS Days	0.0844** (0.0382)	-0.0142 (0.0322)
Variable	Agriculture Work	Agriculture Work
NREGS Days	0.0395 (0.0338)	-0.0047 (0.0334)
Variable	Non-Agriculture Work	Non-Agriculture Work
NREGS Days	0.0771** (0.0330)	0.0556 (0.0356)
Variable	Domestic Chores	Domestic Chores
NREGS Days	-0.0701** (0.0317)	0.0032 (0.0020)
Variable	Unpaid Act	Unpaid Act
NREGS Days	-0.0009 (0.0009)	-0.0048 (0.0032)
First Stage:	NREGS Days	NREGS Days
If Got Work on Time	14.39*** (3.65)	16.64*** (3.97)
F-Stat on Excluded Instrument	17.08	19.44
Observations	2047	1884

Note: See Table Notes of Table 24 for variable definitions, data sources, controls included and other details.

Table 32: IV Results for Potential Differential Effects: Outcome Variable is Number of Hours in a Typical Day an Adult Spends Doing a Major Activity

Panel A: IV Results	Women	Men
Variable	Self-Employ	Self-Employ
NREGS Days	0.0079 (0.0108)	0.0046 (0.0119)
Variable	Wage Work	Wage Work
NREGS Days	0.0267* (0.0139)	-0.0138 (0.0125)
Variable	Agriculture Work	Agriculture Work
NREGS Days	0.0173 (0.0123)	-0.0126 (0.0121)
Variable	Non-Agriculture Work	Non-Agriculture Work
NREGS Days	0.0258** (0.0113)	0.0175 (0.0124)
Variable	Domestic Chores	Domestic Chores
NREGS Days	-0.0092 (0.0068)	0.0006 (0.0004)
Variable	Unpaid Act	Unpaid Act
NREGS Days	-0.0003 (0.0003)	-0.0018 (0.0012)
First Stage:	NREGS Days	NREGS Days
If Got Work on Time	14.39*** (3.65)	16.64*** (3.97)
F-Stat on Excluded Instrument	17.08	19.44
Observations	2047	1884

Note: See Table Notes of Table 25 for variable definitions, data sources, controls included and other details.

Table 33: IV Results for Potential Differential Effects: Outcome Variable is Number of Days Per Month a Child Spends Doing a Major Activity

Panel A: IV Results	Female Children	Male Children
Variable	Self-Employ	Self-Employ
NREGS Days	0.0079 (0.0108)	0.0046 (0.0119)
Variable	Wage Work	Wage Work
NREGS Days	0.0204 (0.0157)	-0.0007 (0.0122)
Variable	Agriculture Work	Agriculture Work
NREGS Days	0.0152 (0.0176)	0.0323** (0.0162)
Variable	Non-Agriculture Work	Non-Agriculture Work
NREGS Days	0.0029 (0.0087)	0.0080 (0.0131)
Variable	Domestic Chores	Domestic Chores
NREGS Days	-0.0054 (0.0174)	-0.0044 (0.0077)
Variable	Unpaid Act	Unpaid Act
NREGS Days	-0.0010 (0.0033)	0.0014 (0.0012)
First Stage:	NREGS Days	NREGS Days
If Got Work on Time	13.58*** (4.07)	13.84*** (3.93)
F-Stat on Excluded Instrument	12.24	13.78
Observations	1991	1844

Note: See Table Notes of Table 26 for variable definitions, data sources, controls included and other details.

Table 34: IV Results for Potential Differential Effects: Outcome Variable is Number of Hours in a Typical Day a Child Spends Doing a Major Activity

Panel A: IV Results	Female Children	Male Children
Variable	Self-Employ	Self-Employ
NREGS Days	0.0005 (0.0036)	0.0044 (0.0044)
Variable	Wage Work	Wage Work
NREGS Days	0.0066 (0.0060)	-0.0001 (0.0046)
Variable	Agriculture Work	Agriculture Work
NREGS Days	0.0069 (0.0065)	0.0123** (0.0058)
Variable	Non-Agriculture Work	Non-Agriculture Work
NREGS Days	-0.0014 (0.0035)	0.0011 (0.0045)
Variable	Domestic Chores	Domestic Chores
NREGS Days	0.0004 (0.0039)	-0.0023 (0.0023)
Variable	Unpaid Act	Unpaid Act
NREGS Days	-0.0004 (0.0012)	0.0004 (0.0003)
First Stage:	NREGS Days	NREGS Days
If Got Work on Time	13.58*** (4.07)	13.84*** (3.93)
F-Stat on Excluded Instrument	12.24	13.78
Observations	1991	1844

Note: See Table Notes of Table 27 for variable definitions, data sources, controls included and other details.

Table 35: IV Results for Potential Differential Effects: Outcome Variable is Number of Hours in a Typical Day a Child Spends Doing Certain Activities:I

Panel A: IV Results	Female Children		Male Children	
Variable	Sleeping	NREGS Days	Sleeping	NREGS Days
NREGS Days	-0.0009 (0.0046)		0.0003 (0.0053)	
If Got Work on Time		14.00*** (4.49)		11.39*** (4.31)
F-stat on excluded instrument		11.26		8.18
Observations	1398	1398	1306	1306
Variable	Caring for Others	NREGS Days	Caring for Others	NREGS Days
NREGS Days	0.0053 (0.0035)		0.0075** (0.0037)	
If Got Work on Time		14.00*** (4.49)		11.32*** (4.33)
F-stat on excluded instrument		11.26		8.04
Observations	1398	1398	1305	1305
Variable	Domestic Task	NREGS Days	Domestic Task	NREGS Days
NREGS Days	0.0033 (0.0048)		-0.0016 (0.0044)	
If Got Work on Time		14.00*** (4.49)		11.39*** (4.31)
F-stat on excluded instrument		11.26		8.18
Observations	1398	1398	1306	1306
Variable	HH Enterprise	NREGS Days	HH Enterprise	NREGS Days
NREGS Days	0.0063 (0.0051)		0.0059 (0.0075)	
If Got Work on Time		14.00*** (4.49)		11.53*** (4.32)
F-stat on excluded instrument		11.26		8.37
Observations	1398	1398	1304	1304

Note: See Table Notes of Table 28 for variable definitions, data sources, controls included and other details. The second and fourth columns are the corresponding first stages for the first and third columns respectively.

Table 36: IV Results for Potential Differential Effects: Outcome Variable is Number of Hours in a Typical Day a Child Spends Doing Certain Activities:II

Panel A: IV Results	Female Children		Male Children	
Variable	Paid Work	NREGS Days	Paid Work	NREGS Days
NREGS Days	0.0017 (0.0067)		0.0012 (0.0063)	
If Got Work on Time		14.00*** (4.49)		11.39*** (4.31)
F-stat on excluded instrument		11.26		8.18
Observations	1398	1398	1306	1306
Variable	School	NREGS Days	School	NREGS Days
NREGS Days	0.0149 (0.0114)		0.0010 (0.0118)	
If Got Work on Time		13.99*** (4.50)		11.39*** (4.31)
F-stat on excluded instrument		11.16		8.18
Observations	1397	1397	1306	1306
Variable	Studying Outside	NREGS Days	Studying Outside	NREGS Days
NREGS Days	-0.0002 (0.0059)		0.0177* (0.0093)	
If Got Work on Time		14.00*** (4.49)		11.39*** (4.31)
F-stat on excluded instrument		11.26		8.18
Observations	1398	1398	1306	1306
Variable	Playing/Leisure	NREGS Days	Playing/Leisure	NREGS Days
NREGS Days	-0.0300** (0.0133)		-0.0315** (0.0151)	
If Got Work on Time		14.00*** (4.49)		11.39*** (4.31)
F-stat on excluded instrument		11.26		8.18
Observations	1398	1398	1306	1306

Note: See Table Notes of Table 28 for variable definitions, data sources, controls included and other details. The second and fourth columns are the corresponding first stages for the first and third columns respectively.