



DR. B.R. AMBEDKAR
SCHOOL OF
ECONOMICS UNIVERSITY,
BENGALURU

A Unitary University, Govt. of Karnataka

BASE University Working Paper Series: 16/2022

Economic Impact of MGNREGS Works in north Karnataka

Sheetal Bharat

Pleasa Serin Abraham

Rajesh Balarama

December 2022

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Abstract

Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) works carried out in Honnakiranagi village in Kalburgi district of North Karnataka are evaluated in this paper for their economic impact on the participants. A preliminary survey on about a third of the households' expenditures suggest that the MGNREGS works had a significant impact on their incomes as well as quality of consumption. It was found that if a household works an extra day under MGNREGS, they are likely to spend over 40 per cent of their additional income on grains, about 6 per cent on milk, over 9 per cent on sugar, over 15 per cent on reading and writing paraphernalia, all other factors being held constant. However, participation in the scheme do not seem to help the families move upwardly in terms of ownership of more durable assets, indicating that the scheme is broadly servicing the demand for necessary goods, not beyond. These findings confirm the Engel law which states that the lowest income families spend large shares of their incomes on necessities. The scheme is adequately performing its intended role of enhancing household budgets for those who most need such an enhancement.

Keywords: MGNREGS; economic impact; consumption expenditure; Karnataka

JEL Classification: D04, D12, I38, J08, J29, O12, O20

¹ The authors thank the Rural Development and Panchayati Raj Department of the Government of Karnataka for funding this study, Dr N R Bhanumurthy for encouraging us to secure the project and for guiding it overall, Dr Sumirtha Gandhi and Dr Aritri Chakravarty for help with STATA, and research assistants, Dr Ekta, Mr Anirudh Ravishankar, and Ms Anupama S J Nair.

Introduction

The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has been receiving much attention in the international policy and academic circles for the role that a welfare state can play in mitigating poverty and its associated maladies. It is also identified as a major automatic stabilizer at the macroeconomic level, especially when the economy faces shocks – and the recent Covid-19 has indeed been a major shock.

The scope of the scheme has expanded significantly in the last decade as the number of types of works provided has increased through convergence schemes, the number of people who have registered for the scheme has increased and the funds allocated to the scheme annually have kept pace of the demand. This major expansion of scope has been accompanied by greater academic interest to evaluate the scheme. This is a necessary task to ensure that the resources, financial and otherwise, devoted to such a large scheme are in fact yielding the anticipated benefits.

The MGNREGS was proposed and enacted in 2005 with the intention of providing 100 days of guaranteed unskilled work per household per year to any person above 18 years of age, regardless of caste, gender or religion. Any of a wide variety of works may be offered, depending on the circumstance – works pertaining to roads, ponds, bunds, irrigation, plantation, forestry, compost pit, cattle shed, tree plantation, wall construction, desilting open wells and tanks, among others. The rules laid down further require that the work should be within a radius of 5km from the residence of the applicant. If the work is farther out, it must be within the block, and a travel allowance must be paid. There are several other rules – pertaining to timely payment, unemployment benefit if work is not provided, worksite facilities, *etc.* – that aim to make the scheme as functional as possible, so that the desired result of reducing economics vulnerability is achieved. In the recent time of crisis, the maximum number of days of work that may be given to one household has been increased from 100 to 150.

Honnakiranagi village lies near the district headquarters of Kalaburagi city, 20 minutes further interior from the main highway going south towards Bellary. It is a small village with only two wards and a population of just 5,500 according to the 2011 Census of India. This village forms the focus of this study because it was so assigned by the Rural Development and Panchayati Raj Department of the Government of Karnataka. The reason for the selection of this village for the project is that it lies near the site for a thermal power plant that was procured from the local farmers by the state government about eight years back. Though it has been a long time, construction has not started at the site and the farmers who no longer own the land continue to grow *toor dal* on it. In this while, it was decided that the site boundaries would be planted with trees under the MGNREGS, to make a natural border. Saplings from the forestry department are being planted in phases in neat rows of three to six all around the site.

The literature has found several positive effects of the scheme on participants and their families in the short and long term. The MGNREGS significantly increased the monthly per capita expenditure on food and non-food consumables, thereby improving the food security by way of ensuring a significant reduction in the number of meals foregone by households per

week. Also, the scheme seemed to raise the probability among the beneficiaries of holding savings and reduced the incidence of emotional anxiety (Ravi & Engler 2015). This reduction in anxiety can go a long way in securing the economic positions of the households and therefore reducing the various vulnerabilities that they may otherwise face. There are also strong positive effects of the MGNREGS on female decision-making power related to the pattern of consumption of nutritious foods, children's education, and female labour supply (Tagat 2020). These can go a long way in ensuring intra-household equality in resource allocation – something that is not easy to achieve without targeted interventions because of the deeply socially embedded nature of these practices (Williamson 2000). The spill-over effects of MGNREGS participation on education for young children are potentially large as it has been observed that improved financial security for the household results in increased schooling and improved opportunities for young children. That said, there also instances of perverse effects on education, where older children spend less time in school, and more time in the labour market, at least partly due to the higher wages induced by the scheme (Islam & Sivasankaran 2014). Trivedi and Aswal (2011) seem to suggest that there might be reduced reliance on the scheme in Assam – which is exactly what is intended. Our interviews with the higher-level department officials did indicate that they wish for more people to not have to rely on the scheme. The scheme may apply to a fluid set of beneficiaries, and hopefully no single family will continue to rely on the scheme for too many years in a row. Once their financial position stabilises, they may bring their participation in the scheme down to just one or two days to keep their registration alive for any future exigencies. A hint of this practice has in fact been observed during the primary survey for the current project: several of our interviewees had only a token one or two days on record under the scheme, because of which their registration was alive.

The scheme has given the authority to the local bodies to generate work by sustaining the local resources and creating irrigation, agricultural asset base within the village set up itself, but these rights are too often not being utilised to check out-migration, one of the major aims of the scheme (IAMR 2008). An on-going project granted by the same government department to the same team of researchers finds, in the preliminary stages of the project, that participation in the scheme does in fact reduce distress migration: one extra day of work undertaken by the household per year reduces outmigration by anywhere between one and seven days for an average sized family. This result is based on a single village – a similar project for five North Karnataka districts is on-going.

Objectives and methodology

The beneficial impacts of MGNREGS surely exist, but they differ in extent and by context. This study works towards ascertaining the impacts of MGNREGS in a single village in north Karnataka. Given the uniform rules followed for implementing this scheme throughout the country, the results arrived at in this study can be held to be valid in other rural settings within India as well. The objectives of this project may be divided in two parts:

- i. To ascertain whether the plantation works administered under the MGNREGS have been functioning as set down in the rules. Specifically:
 - a. Beneficiaries meeting eligibility criteria
 - b. Days of work provided
 - c. Caste distribution of beneficiaries
 - d. Timely payments
- ii. To ascertain whether the plantation works have resulted in the positive effects anticipated, specifically:
 - a. Increase in the household consumption
 - b. Increase in the durable assets owned
 - c. Improvement in the above parameters for underprivileged groups

The conceptual framework for this study is straightforward. Participation in the scheme would enhance the earned income of the households and therefore may translate to an increase in their food or non-food items expenditures, including long term investments like durable assets.

The number of days of productive employment may be listed as a desirable outcome of the scheme because of the certain psychological benefits derived from being employed and being responsible for earning for the self and family (Schumacher 2011, Raworth 2017). Such intangible benefits of the scheme are not addressed in this study due to measurement challenges. Instead, it focuses on the other two measurable benefits of the scheme – ownership of durable assets and expenditure on food and non-food items.

A brief review of the related literature shows that it is viable to measure economic impact using the 2 variables – consumption and ownership of durable assets, with the duration of employment granted under the scheme as the input. A look at a few studies that survey MGNREGS beneficiaries at the household level shows that all of them include these two variables in some form for their specified objectives.

Kumar and Kharkwal (2015) studied the impact of MGNREGS over a period of six years (2007-2008 to 2013-2014) in Udham Singh Nagar district, Uttarakhand. They have collected detailed profiles of beneficiaries and data on expenditure, land holding, livestock, other assets, employment, etc. The paper concludes that the scheme has enhanced purchasing power for beneficiaries, asset possession, expenditure on health and education. Sarkar and Kumar (2011) performed an identical study in Burdwan District, West Bengal. The selected indicators include expenditure on food and non-food items, value of productive assets, etc. There is no data on employment duration. The study found that, while the socio-economic situation of households working under the MGNREGS is significantly worse than that of other rural households, conditions are slowly improving. Ahuja et al. (2011) collected data on asset-ownership and duration of employment to assess the effect of the scheme on migration and socio-economic status in Mewat and Karnal districts of Haryana. Although there is no data on consumption, the study found that MGNREGA has been unable to check migration due to higher market wages. Xavier and Mari (2014) assess the impact of MGNREGS on women empowerment and socio-economic development in Sivgangai district, Tamil Nadu. They collect data on income, expenditure and health hazards faced by women and conclude that the scheme satisfies the food requirements of most of the families. Ganeriwala (2010) extensively

studies the impact of the scheme on beneficiaries in 6 districts in Sikkim through consumption expenditure. In summary, the studies above confirm that economic impact can be measured by the two specified variables.

The simple observation through this study could be that families registering themselves for the MGNREGS and participating in paid unskilled work increase their expenditure. It may be more interesting to observe where more of the additional income is spent – on food or on non-food items. If the additional earned income is spent on food items, that would indicate that the level of poverty of the families was dire and that their previous income was barely adequate to cover all their food expenses. This would mean that the MGNREGS is playing a crucial role in helping families maintain the minimum consumption requirement of the households. If, on the other hand, it is observed that the expenditure on non-food items increases by more, then it may be claimed that the scheme is helping families who had their basics covered live marginally more comfortably by permitting them to invest in durable assets and spend on other non-food items. So, if participation in the MGNREGS is associated with *greater* expenditure on food or non-food items, not less, it may be said that the role of MGNREGS in uplifting rural livelihoods is laudable.

Data and some summary statistics

Honnakiranagi village is a small stretch of civilisation in the midst of vast open tracts of land growing *toor dal*. The centre of the village is marked by a petrol pump, an open field and the MGNREGS office in the village is well-staffed. It is abundantly clear that the MGNREGS works undertaken at Honnakiranagi village form a key component of the local social and economic life.

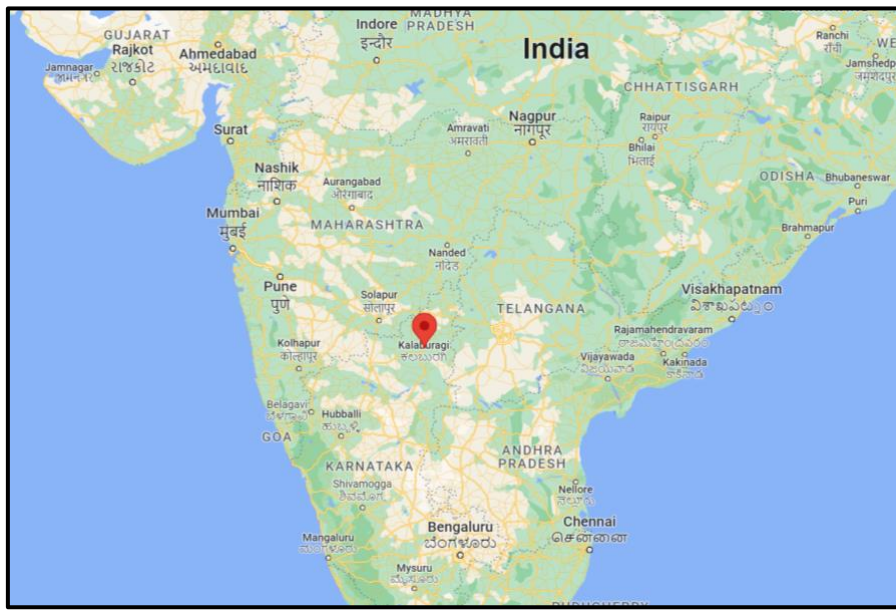
The proposed thermal power plant site is bordered with trees planted under the MGNREGS, the aim being *laksha vruksha*, Kannada language for *a hundred thousand trees* planted around the site. MGNREGS participants in Honnakiranagi village have been assigned other works also, but on average, over 30% of all the person days of the 321 sampled households have been in the plantation works.

The randomly selected sample of 321 households is just over 30% of the total number of households in Honnakiranagi village. Some observations based on the summary statistics presented in *Table 1*:

- 45% of the sampled households have female household heads, which does appear to be a rather large figure.
- The level of education in Honnakiranagi is low, with only 26 household heads having any education at all. Among those who have attended school at all, the average years of schooling is 6.31. 161 households of the 321 interviewed had members who had completed the 10th grade. Of these 161, a further 77 households had members who had completed the 12th grade. Of these, only 10 households had members who had completed an undergraduate degree, and only 1 of those had completed a postgraduate degree.

- The average household size is 4.95 members, with 3.17 of them being adults.
- 73% of the homes have some *pakka* construction, either cement or Shahabad stones – flat strong stones locally available in plenty.

Illustration 1: Honnakiranagi in India, and geolocation of the sampled households



- Only 30 households had rented homes – all others owned the homes they lived in and had all proper documentation, as was facilitated by the *Awas Yojana*. It is at least clear that, from the home ownership perspective, the households are not in a vulnerable position.
- The average number of days of MGNREGS employment undertaken by the households that are registered under MGNREGS in 2021-22 is almost 50 days. During the pandemic the maximum number of days of work that may be opted by one household was increased from 100 to 150, because it was felt that this additional assistance will be needed at a time when other market activities are largely halted.
- 249 of the 321 households interviewed did not own any land at all. Among those who did, the average size of the holding is 2.8 acres. It may be noted that the survey was restricted to only those families who would qualify for being registered under MGNREGS. So the maximum amount of land owned by a family in our sample is 5 acres.
- 25% of the respondent families had any livestock at all, the rest had none.
- 78% of the households had an electric fan at home.
- 62% had a smartphone. This is an indication of the high mobile phone penetration into rural India. Households that have very few other durable assets have mobile phones with active data connections.
- 6% of the households had a bicycle. Given that a bicycle may be considered as the cheapest mode of transport, it is disappointing to see that most families did not have a bicycle. That said, we may not need to seek far for a probable explanation. In villages that happen to be close to industrial centres, many women and men commuting to it by bicycle is a common sight. Honnakiranagi has very few bicycles because there are no major industrial centres that hire daily wage workers within cycling distance. The thermal power plant is not functional yet – but it might, in the future, play this role of providing daily employment to the residents of this village.
- 8% had a sewing machine. Since use of a sewing machine can be seen as a skill, it is not surprising that very few families own one.
- It may further be added that none of the interviewed households had a television or any motorised vehicle, and only two families had a radio. These observations go a long way to illustrate the level of the poverty of the village in general.

These preliminary observations are indicative of the level of poverty of the region in general and the village in particular. Interviewing participants of the MGNREGS scheme from this village seems appropriate, as the scope for enhancement in income and consumption is in fact great.

This study calls for the straightforward application of the ordinary least squares method to the question of the impact of participation in MGNREGS work on consumption expenditure. The dependent variable could be chosen from among any of a wide range of questions in the primary survey – expenditure on milk products, meats, fruits, vegetables, among other food items, and expenditure on newspapers, education, health, jewellery, clothes, among other non-

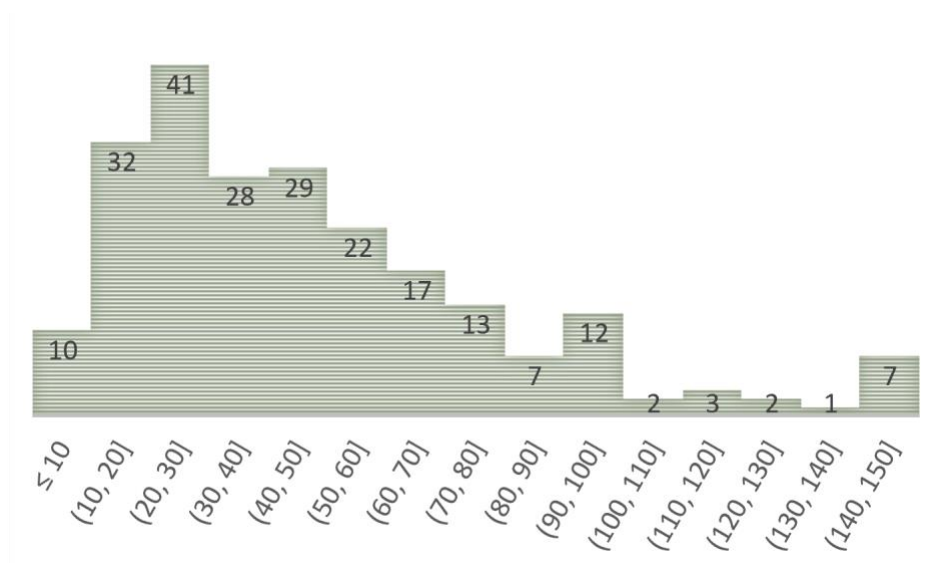
Table 1: Summary statistics

| <i>Variable</i> | <i>Minimum value</i> | <i>Maximum value</i> | <i>Mean</i> | <i>Std dev</i> |
|-------------------------------------|----------------------|----------------------|-------------|----------------|
| <i>Female household head</i> | 0 | 1 | 0.45 | 0.50 |
| <i>Yrs of education of hh head*</i> | 1 | 15 | 6.31 | 3.23 |
| <i>Members</i> | 1 | 15 | 4.95 | 2.35 |
| <i>Adult members</i> | 1 | 10 | 3.17 | 1.51 |
| <i>Female members</i> | 0 | 10 | 2.30 | 1.43 |
| <i>Pakka homes</i> | 0 | 1 | 0.73 | 0.45 |
| <i>Home ownership</i> | 0 | 1 | 0.91 | 0.28 |
| <i>MGNREGS job card</i> | 0 | 1 | 0.87 | 0.33 |
| <i>MGNREGS workdays*</i> | 2 | 150 | 49.85 | 33.18 |
| <i>Land owned*</i> | 0.5 | 5 | 2.80 | 1.02 |
| <i>Livestock owned</i> | 0 | 1 | 0.25 | 0.43 |
| <i>Fan</i> | 0 | 1 | 0.78 | 0.42 |
| <i>Cycle</i> | 0 | 1 | 0.06 | 0.24 |
| <i>Sewing machine</i> | 0 | 1 | 0.08 | 0.27 |
| <i>Smartphone</i> | 0 | 1 | 0.62 | 0.49 |

Notes:

- i. Averages, standard deviations marked with * are computed only for non-zero values.
- ii. Land ownership is given in acres.
- iii. All 0-1 variables are dummy variables.

Illustration 2: Distribution of MGNREGS person-days among households who have worked for at least 1 day from April 2021 to March 2022



food items. These are all recurring expenses. The survey also asked about the ownership of durable assets such as phones, fans, refrigerators, among others.

The model

The primary independent variable of interest is the number of days of MGNREGS work undertaken by the family in the last year. The variation required to arrive at an estimate comes from the number of days of work undertaken by each household. Though most households were registered under MGNREGS, the number of days of work varies widely, ranging all the way from 0 to the maximum permitted 150 days per year. 226 of the 321 interviewed households had worked for at least 1 day from April 2021 to March 2022. The distribution of the days worked per year per household is shown in *Illustration 2*.

Expenditures on the various goods or categories of goods will of course be in proportion to the number of members in the family. So, we include the number of family members as an explanatory variable. The specification requires a wide range of other control variables – gender and education of the head of the households, type of home, caste dummies, land owned, number of months the household has been registered under MGNREGS, and livestock owned. Each of these may be expected to have some impact on the various dependent variables listed. For instance, it could be that female-headed households tend to participate in the works more because of a lack of alternative employment opportunities. Homes without *pacca* walls and roofs and households who do not own any land may in general be poorer and so rely more on the assistance afford by the scheme. Caste may certainly play an important role in the rural Indian labour market, though the direction of influence is to be ascertained based on the case at hand.

The variables are all at the level of the household. The model specification is as follows:

$$y_i = a + bM_i + cX_i + \varepsilon_i$$

where y_i would be any of the various options we have for dependent variables, M_i is the number of days of MGNREGS work undertaken by the family in the year 2021-22, X_i is the vector of control variables, and ε_i is the error term.

To take a simple example: if the dependent variable is the annual expenditure on milk products, then the coefficient on the MGNREGS days of work variable may be interpreted as the change in the annual milk expenditure if the family undertakes one more day of MGNREGS work per year. Since the daily MGNREGS wage rate is known to be Rs 289, excluding any further allowances for transport or use of personal equipment, it is more meaningful to see what proportion of the wage earned is spent on each good rather than the absolute amounts.

Results

The results (*Table 2*) show only those regressions results where the coefficients were statistically significant and economically meaningful. The coefficient on monthly grain expenditure is 121.46. If a family works one extra day under MGNREGS, the annual grain expenditure can be expected to be Rupees 121.46 higher. This is 42% of the daily rate that the family would have earned from that one extra day of MGNREGS work. This result controls for no other influence. Next, we include a control variables: number of household members, amount of land owned, caste dummies, gender and educational level of the head of household, whether the home is of *pakka* construction, duration of employment under MGNREGS. There is only a slight decrease in the coefficient with these control variables. The annual grain expenditure would change by Rupees 119.33, which is 41% of the MGNREGS income earned from this additional one day's work.

In the case of milk, if a family works one extra day under MGNREGS, the annual expenditure on milk is likely to be higher by Rupees 16 to 19, which is about 6% of the daily MGNREGS wage rate. While the magnitude of this result is not very big, it is statistically significant. This is understandable, since rural households may not wish to spend a large share of their earned income on relatively expensive dairy products.

In the case of expenditure on sugar, jaggery and honey as well, we find that the coefficient is of small magnitude, but it is highly statistically significant. One more day of MGNREGS work translates to Rupees 26 to 27 more per year on these sweeteners, which is just under 10% of the daily MGNREGS wage. This result must be considered together with the fact that the beneficiaries who happen to have completed their MGNREGS work at the plantation site had access to the honey from the wild bees among the trees along and within the thermal plant site.

The stationery, newspapers and magazines category has similar results. If a family undertakes an extra day of MGNREGS work, it is associated with a greater annual expenditure of Rupees 44 to 55, which is 15-19% of the additional income. It is also interesting to note that the education of the household head comes in as weakly statistically significant in only this regression and in none of the others. If the head of the household has one more year of education, all other things being held constant (including days of MGNREGS work), the annual stationery expenditure for the family is likely to be Rupees 644.75 more, a statistically and economically significant result. This result makes intuitive sense and gives confidence in our other results. An educated head of the household lays more stress on expenditures associated with reading.

Table 2: Results

| | MGNREGS coefficient (std error) | Percentage of daily wage (Rs 289) | Statistically significant controls variables |
|---|--|--|--|
| Dependent variable: annual <u>grain</u> expenditure | | | |
| No controls | 121.46 (26.64) | 42.03 | -- |
| With controls | 119.33 (27.43) | 41.29 | Members, land, OBC |
| Dependent variable: annual <u>milk</u> expenditure | | | |
| No controls | 16.22 (9.03) | 5.61 | -- |
| With controls | 19.64 (9.69) | 6.80 | None |
| Dependent variable: annual <u>sugar</u> expenditure | | | |
| No controls | 26.02 (8.95) | 9.00 | -- |
| With controls | 27.43 (8.70) | 9.50 | Members, female head of household, land, <i>pakka</i> home, other caste |
| Dependent variable: annual <u>stationery / magazines / newspapers</u> expenditure | | | |
| No controls | 55.23 (26.64) | 19.11 | -- |
| With controls | 44.26 (27.61) | 15.31 | Duration of registration under MGNREGA, <i>pakka</i> home, education of household head |

Robustness checks

We tried the above process with some other dependent variables as well, like expenditure on tea and coffee, oil and spices, fruits, vegetables, intoxicants, soaps and shampoos, transport expenditure, mobile recharge, expenditure on fuel and electricity, clothes, education, kitchen utensils jewellery, various durable assets. However, these did not yield meaningful results. In addition, we also tried the above process with the same dependent variables as above, but in per capita and adult equivalent scale form, and without the number of members in the household as an explanatory variable. The results were of a similar magnitude, thus giving us some confidence that our results are in fact robust.

One minor but interesting observation with the per capita regressions was that per capita milk expenditure was highly negatively correlated with the ownership of livestock. Ownership of cattle is associated with a lower annual expenditure on milk by Rs 212.35 – again, giving us confidence in the overall validity of our results.

Another result to be noted was with furniture expenditure. An extra day of MGNREGS work is associated with a 19-Rupee *lower* annual furniture expenditure per capita. Since furniture purchase is a long-term consideration for most families, it is probably the case that this negative coefficient is reflecting the selection of families into the MGNREGS. Families that have a lower level of expenditure on furniture are the ones who need MGNREGS employment. Hence, this cannot be considered as an outcome of the scheme, but merely a reflection of the self-selection aspect of it.

A variable controlling for the duration that the family has been registered under MGNREGS was included with the anticipation that it might have a positive coefficient when durable assets are the dependent variable. We expect that the longer a family has been registered under MGNREGS, the more they might have been able to save, and so their ownership of durable assets might be greater. We do not expect this coefficient to show up significantly with the more immediate food expenditure. This result has not in fact materialised in as obvious a way, except in the case of cycle ownership. An extra year of association with MGNREGS is associated with a 0.5 percent greater probability of the family owning a cycle. This is a statistically significant result, through the value itself is small. The value being small is understandable because only 6% of the households owned a cycle. Among the cycle owning households, only one was not registered for MGNREGS, and the average duration of registration among the rest is 113.7 months, or about 9.5 years. The average duration of registration among the households that do not own a cycle is only 95 months or under 8 years.

The fact that this result has not materialised for most of the other durable assets could be taken to indicate that the scheme and the income it affords cannot be seen as a long-term route out of poverty for the enrolled families, but only as a short-term way to be able to purchase adequate food and other necessities for the family. This is an important finding and further strengthens the original aims of the scheme – to act as a temporary measure to aid rural families who are unable to make ends meet.

These results clearly indicate that there is a strong positive association between the number of days of MGNREGS work undertaken by a family and their annual expenditure on certain foods and non-food items. The percentages of the daily wage spent on these goods also seem to be in accordance with the relative importance of these consumption goods in the overall diet. Grains are consumed in greater quantities than dairy products and sugars.

These results are encouraging and tell us that the basic objective of the MGNREGS in providing gainful employment to the poorest sections of society appears to be broadly achieved. The participating families do indeed seem to be in a position to take better care of their families through improved expenditure on certain food and non-food category items.

Discussion

Connecting back to our conceptual framework using standard microeconomic theory, we have strong evidence to support the claim that participation in the MGNREGS is associated with greater expenditure in both food and non-food categories. Around 40% of new income earned is likely spent on grains – this is reflective of the fact that poorer families tend to have a higher marginal propensity to consume, especially food items. Among the statistically significant results, it appears over half of newly earned income is spent on food items. A further 10% of newly earned income is spent on reading paraphernalia, and this is an encouraging finding.

Together with the empirical evidence, the study team also found that in terms of implementation, the MGNREGS is doing exceptionally well in Honnakiranagi and has the good faith and confidence of the beneficiaries. Indeed, it was observed that more than three-fourths of new job card applications are normally cleared within a week. Further, nearly 90% of the job card holders report that they have been receiving their payment electronically and on time.

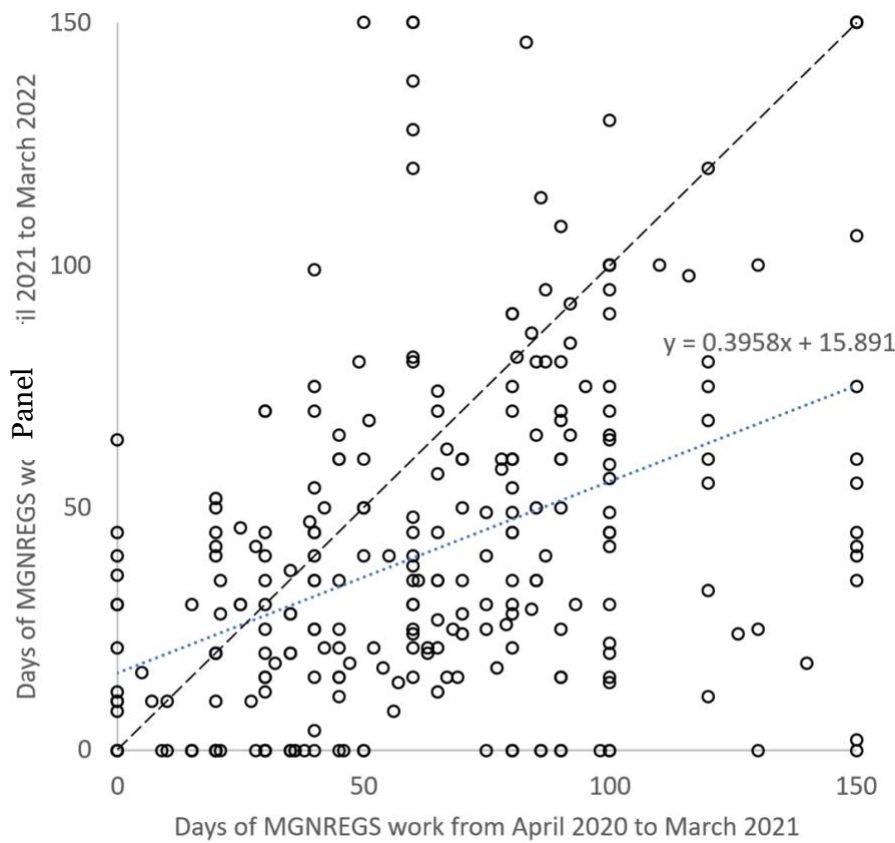
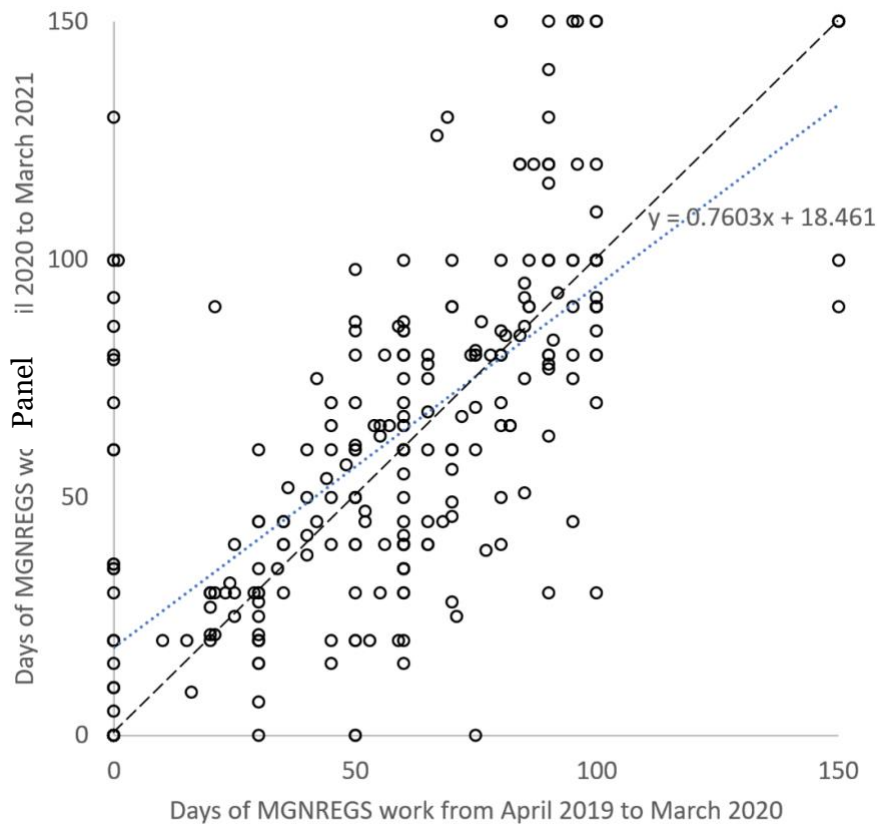
Among the 45 respondents who did not undertake MGNREGS work between April 2021 and March 2022, 32 did not seek work at all. Only 13 respondents sought work but did not receive any during this period.

More than two-thirds of the MGNREGS job card holders had their work assigned within a 5-km distance from their place of residents, as is required under the Act. It is possible that several, if not all, of the remaining MGNREGS workers have been provided transport facility to reach the thermal power plant work site on a tractor, personally owned by the MGNREGS field assistant. This is based on our observation that about 30% of the person days of the sampled households have been created on the thermal power plant site.

A parenthetical point is that part of the success of the scheme in Honnakiranagi village is due to this MGNREGS field-assistant² who has taken it upon himself to make a success of the MGNREGS works in general and the tree plantation project in particular. He has been known to help the families secure the required registration documentation and facilitate their payments in a timely fashion.

² Mr Sadashiva was most generous with his time and energies in showing the team the MGNREGS works he is organising, yet he did not attempt in the least to nudge the choice of households for interviews or their responses in any direction. His ideas to eliminate any MGNREGS-related corruption in other villages suggest that he has the interest of the scheme at heart. It is his motivation that has caused Honnakiranagi village to receive awards and recognition from the RDPR for the impact it is having on the local economy.

Illustration 3: Relation between days of MGNREGS work in 2019-20, 2020-21 and 2021-22



A look at the number of days of MGNREGS work in the previous two years reveals a few more interesting pieces of information of how the scheme has helped during the Covid-19 pandemic-related lockdowns. Panel A of Illustration 2 measures days of MGNREGS work from April 2019 to March 2020, and the y-axis measures the same for April 2020 to March 2021. The line of best fit is dotted, and a 45-degree line is given as dashed. Panel B, in the same way, relates days of MGNREGS work in 2020-21 on the x-axis and 2021-22 on the y-axis. An observation lying on the 45-degree line indicates that that family has worked the same number of days in both years.

There are two observations to be made in Panel A:

- i. Several households who did not take up MGNREGS work in 2019-20 did in fact take up work in 2020-21 – these are all the points along the y-axis.
- ii. It appears only three households worked more than 100 days in 2019-20, which was mostly a normal year – before the lockdowns were announced at the very end of the financial year. In contrast several households worked 100 or more days in 2020-21. In fact, several households who worked much fewer than 100 days in 2019-20 worked 100 or more days in 2020-21.

Similarly, the two observations to be made in Panel B are:

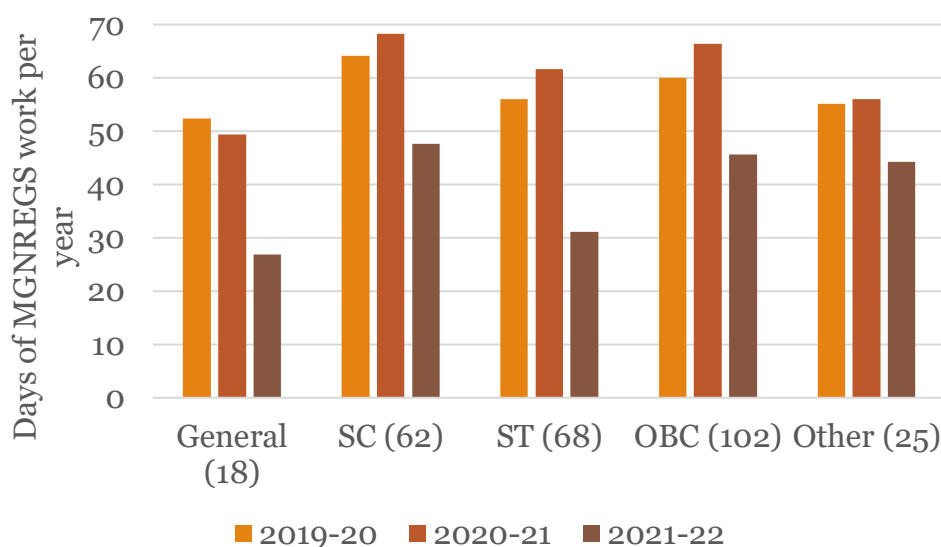
- i. Observations along the x-axis and at the rightmost edge of the plot indicate that several households that participated in MGNREGS work in 2020-21 did not use it again in 2021-22, and that households who worked the maximum permissible days – 150 in 2020-21, worked much fewer days in 2021-22.
- ii. There are many more points below the 45-degree line than above it, indicating that households have worked fewer days in 2021-22 than in 2020-21 – a sign of economic recovery from the effects of the pandemic.

These observations give a clear view of the fact that households struggling under the influence of the pandemic-related lockdowns have relied on the employment guarantee scheme to supplement their incomes or to be able to earn anything at all. This view, put together with the low level of durable assets that the families own, readily suggests that the scheme has played a crucial role in helping the poorest families stay afloat in difficult times.

Illustration 4 shows the distribution of work across the social groups. The general category households, as would be expected, have relied much less on the scheme than the other categories. This is also evident from the number of general category households who have qualified for the interview – only 18. It could of course be that there are only a few general category households in Honnakiranagi village. This could still lead one to argue, that in a village with not very much variation in socio-economic characteristics, the number of SC, ST and OBC far outweigh the general category families. Also, the reduction in their count of days worked between 2020-21 and 2021-22 has been most stark. The reduction in the MGNREGS days count has been quite drastic for the ST category also, hopefully indicating that these households have recovered well from the negative economic shock. For the SC, OBC and Other categories, the struggle seems to be more persistent. The SC and OBC categories do

seem to be relying on MGNREGS work more on average and the reduction in their count of days works is also less in the latest year, indicating that they are still in need of this assistance.

Illustration 4: Average days of MGNREGS work undertaken by social groups



Note:

- i. Families who did not undertake MGNREGS work in these three years at all are excluded from the average computations*
- ii. The number of families included in each category is shown in brackets at the x-axis labels*

A general question in the primary survey regarding the perceived benefit of the MGNREGS yields the insight that most respondents believe that participation in the scheme has afforded them the possibility of eating proper meals on a regular basis, it has increased the household earnings capacity for other purposes, and it has reduced the need for residents of the village to migrate in search of employment opportunities. These are all accomplishments of a high order and must be recognised as such.

From the broader human rights perspective, there is surely a lot to be achieved. The level of education of the residents of Honnakiranagi village is low, and it is even lower among the women. The level of skills may improve, the range of economic activities they participate in could increase to afford a more stable economic climate, *etc.* But from the narrow perspective of the MGNREGS, it appears that the scheme has succeeded to a large extent in achieving its intended objectives.

Conclusion

As presented in the introductory section of this paper, there are several studies that have identified and measured the positive effects of the MGNREGS on various aspects of the lives of the beneficiaries. This paper adds to that literature. Households that participate in the scheme do appear to be spending more on grains, milk, and sweeteners among food items and stationery among non-food items. Given that the village is quite removed from any larger civilizational influences, and given that household level characteristics are all controlled for, it is safe to assume that it is in fact participation in the scheme that is the reason for those increased expenditures.

Through a primary survey of 321 households' basic socio-demographic characteristics, their participation in the scheme, and their expenditures on various categories of goods, we use a simple ordinary least squares model to ascertain the impact that participation in the scheme has on their expenditures and on their ownership of durable assets. We limit the definition of "economic impact" to what can be measured using these variables.

The summary statistics highlight the overall level of poverty of the households in this village. Televisions and motorised vehicles are owned by none of the households interviewed. Electric fans and mobile phones are owned by about a third of the households. The average land ownership among those who own any land at all (under a quarter of those interviewed) is 2.8 acres. These statistics indicate that the scheme is meant for a population of exactly this description. Those without land and very less or no education are most likely to be economically vulnerable and so need a scheme such as this to tide them over negative shocks.

The results go some way in showing that the scheme is performing along all the parameters it is supposed to: there is participation among all social groups – no one is left out; it has been available to the rural households at the peak of the pandemic-related lockdowns when other avenues for earning were unavailable, the payments are all going properly to the bank accounts of the beneficiaries without delays or errors. These are only about the implementation of the scheme. Even with regards to the impact, the scheme seems to be helping families spend more on the key food categories of grains, dairy and sweeteners. About half of their earnings from an extra day of work under the MGNREGS is going towards these food groups. Knowing that the marginal propensity to consume for poor families tends to be relatively high, this result tells us that the scheme is making it possible for low-income families to purchase basic food items. The only non-food item for which there seems to be any effect is the stationery or newspaper category. Working under the scheme does seem to permit families to spend marginally more on these reading paraphernalia.

The fact that similar results do not show up for durable assets indicates that the scheme is only serving the purpose of helping families tide over difficult times, and it is not helping families accumulate durable assets. This is in line with the way the scheme is being envisioned by the department.

References

- Ahuja, U. R., Tyagi, D., Chauhan, S., & Chaudhary, K. R. (2011). Impact of MGNREGA on rural employment and migration: A study in agriculturally-backward and agriculturally-advanced districts of Haryana. *Agricultural Economics Research Review*, 24(conf), 495-502. <https://ageconsearch.umn.edu/record/119403/files/16-Usharani-Ahuja.pdf>
- Ganeriwala, S. A. (2010). An Impact Assessment Study of the Usefulness and Sustainability Of the Assets Created Under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) In Sikkim. Institute of Rural Management Anand. http://www.tsird.gov.in/documents/resources/cnrm/IRMA_Study_Sikkim_2010%20Usefulness%20of%20MGNREGA%20in%20Sikkim.pdf
- IAMR (2008). All-India report on evaluation of NREGA: a survey of twenty districts. New Delhi: Institute of Applied Manpower Research.
- Islam, Md. and Sivasankaran, A. (2015). How does child labor respond to changes in adult work opportunities? evidence from NREGA impact. Available at http://scholar.harvard.edu/files/mahnazislam/files/nrega_mahnaz_anitha_1.pdf, accessed on January 25, 2017.
- Kharkwal, S., and Kumar, A. (2015). Socio-Economic Impact of MGNREGA: Evidence from District of Udham Singh Nagar in Uttarakhand, India. *Indian Journal of Economics and Development*, 3(12), 1-10. Retrieved from <http://ijed.informaticspublishing.com/index.php/ijed/article/view/88187>
- Ravi, S. and Engler, M. (2015) Workfare as an effective way to fight poverty: the case of India's NREGS. *World Development* 67: 57–71.
- Raworth, K. (2017). *Doughnut economics: seven ways to think like a 21st-century economist*. Chelsea Green Publishing.
- Sarkar, P., & Kumar, J. (2011). Impact of MGNREGA on Reducing Rural Poverty and Improving Socio-economic Status of Rural Poor: A Study in Burdwan District of West Bengal §. *Agricultural Economics Research Review*, 24 (conf), 437-448. <https://ageconsearch.umn.edu/record/119395/files/10-P-Sarkar.pdf>
- Schumacher, E. F. (2011). *Small is beautiful: A study of economics as if people mattered*. Random House.
- Tagat, A. (2020). Female matters: Impact of a workfare program on intra-household female decision-making in rural India. *World Development Perspectives*, 20, 100246.
- Trivedi, B. R. and Aswal, B. S. (2011). *Encyclopedia of NREGA and panchayati raj*. New Delhi: Cyber Tech Publications.
- Williamson, O. E. (2000). The new institutional economics: taking stock, looking ahead. *Journal of economic literature*, 38(3), 595-613. DOI: 10.1257/jel.38.3.595
- Xavier, G., & Mari, G. (2014). Impact of MGNREGA on Women Empowerment with Special Reference to Kalakkanmoi Panchayat in Sivgangai District, Tamil Nadu. *International Journal of Economics and Management Studies*, 1(1). <https://www.academia.edu/download/36456192/IJEMS-V1N1P101.pdf>

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Contact: Dr. B. R. Ambedkar School of Economics University, Bengaluru  
Jnana Bharathi Main Road,  
Nagarbhavi,  
Bengaluru, Karnataka – 560072  
Email: [library@base.ac.in](mailto:library@base.ac.in)