



IMPACT OF MGNREGA ON SUPPLY OF AGRICULTURAL LABOUR

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ABSTRACT

Most studies of economic crises study the impacts of recessions on urban labor markets. The most common crisis in developing countries is the variability in rainfall which affects demand for agricultural labor in rural areas. The productivity upset in agriculture depends on rainfall variability, it affects wages adversely. The labour scarcity being felt as a major impediment in agriculture. In this paper the impact of MGNREGA on income generation and labour supply in agriculture. Implementation of MGNREGA creates labour in a secure manner.

Keywords: Economic rates, Recessions, Labour Markets, Supply in agriculture.

Introduction

Labor economists have long been concerned with measurement of wage gaps across demographic groups like gender, race and ethnicity in different occupations. As noted in many countries, there is also a persistent gap in agricultural wages received by females and males in India. Agricultural wages respond to rainfall variability in India as demand for agricultural labor changes in response to rainfall since Indian agriculture is predominantly rain-fed. This can have an impact on gender wage gap in agriculture depending upon asymmetric labor demand and labor supply effects of rainfall variability on male and female labor in agriculture. Understanding this heterogeneity is important to inform the policymaking if any demographic group is hurt more than the other in times of such aggregate crisis. In this paper, we estimate the effect of rainfall shocks on gender wage gap in agriculture and also try to explore the possible mechanisms which lead to the observed results.

Most studies in wage gaps across different demographic groups are either concerned with the proportion of wage gap which can be attributed to individual observable characteristics and market institutions or trends in wage gaps over time within countries which can be explained by changing labor market conditions. Very few studies examine the cyclical nature of these wage gaps due to tightening in the labor market caused by recessionary



conditions. Earlier studies by Ashenfelter (1970), Freeman (1973), O'Neill (1985) and more recently by Biddle and Hamermesh (2011) analyse the impact of aggregate changes in unemployment rates in the economy on gender gap in wages using data from United States. Freeman(1973) finds that gender wage gap increases when high unemployment rates prevail in the economy and attributed it to possibly greater vulnerability of females to layoffs due to lesser training and in general a weaker labor market for females during recessions. Biddle and Hamermesh (2011) also find that gender wage gaps are counter cyclical in nature. They attribute it to greater discrimination against females during downturns. Contrary evidence to the above is presented in Solon et al (1994) and Park and Shin(2005). Using another dataset for the United States they estimate that gender wage gaps are pro-cyclical in nature. This they argue is due to males being over represented in industries with more pro-cyclical demand. To the best of my knowledge, there is no paper which analyses the impact of adverse demand shocks in rural labor markets on gender gap in agricultural wages in a developing country context.

Agriculture plays a pivotal role in employment generation in developing countries. It continues to be the mainstay of the Indian economy in terms of its share of employment. Though, the contribution of agriculture to Indian Gross Domestic Product is low (it now stands at approximately 15 percent according to Economic survey 2010-11) and is declining yet, 75 percent of rural workforce (Census 2001) is engaged in agriculture (rural population comprises 72 percent of total population in India) and it occupies an important place in the economic and social fabric of India. It remains the largest sector absorbing the Indian workforce. Agricultural laborers constitute 45 percent of the agricultural workforce (Census 2001). Landless households which form the lowest income quintile in India are completely dependent on agricultural wage labor for their income. They mostly work in agriculture as casual laborers since regular wage contracts in agriculture are very few (National Sample Survey 2004). In terms of gender composition, about 74 percent of female work force in India is engaged in agriculture and there is growing feminization of agricultural workforce as men are able to find alternate non-farm opportunities, however females in rural areas have not been able to gain access to non-farm jobs.

There also exists a gender gap in wages in agriculture in India. Table 1 shows the female to male wage ratios across 15 Indian states from the National Sample Survey rounds of 1993-2007. On an average, the female to male wage ratio in Indian agriculture stands at 70 percent and has not shown



any changing trend over time. Mahajan and Ramaswami (2012) analyse the cross-sectional variation in agriculture wage ratios across Indian districts to find determinants which affect the spatial variation in wage ratios, particularly, the large wage gaps observed in the southern states of India. This paper focuses on over time fluctuations in gender wage gap in agriculture due to productivity shocks like rainfall variability which affect agricultural wages by affecting demand for labor in agriculture.

In the past few decades, climate change has made rainfall more variable in India leading to recurrence of drought like situations across different parts of India in different years. Each year some part of the country suffers from rainfall scarcity leading to low agricultural output and affects the livelihood of people in rural India. Such aggregate shocks are difficult to insure against using informal networks as they are correlated at community level. Of the twenty two countrywide major droughts witnessed in India in last 120 years, seven have occurred in the last 3 decades. The Indian agriculture is still predominantly rain-fed with less than 50 percent cultivable area under irrigation which makes agricultural output highly susceptible to rainfall shocks, thus affecting demand for labor and agricultural wage levels. These shocks may not have gender neutral effects on labor market outcomes, thus understanding the heterogeneous effect of such shocks by gender on labor market outcomes are of importance to formulate policies which mitigate possibly more adverse impacts on any section of the society.

There is a growing recognition that climate change can impact lives of women by affecting availability of natural resources like fuel-wood, water and forests and also because the coping mechanisms are different for men and women due to societal-constructed gender roles(WEDO(2008)). Alternative employment opportunities for women are also constrained during such distressful times either due to social norms or lack of alternative skills. Drying up of nearby water-bodies due to droughts increases the time spent by women in carrying water for household chores as this task is typically performed by women, leaving lesser time to participate in income generating activities. Climate change can also affect the livelihoods of women by changing the crop composition and technology.

In the next section we provide a literature review of studies looking into the impact of weather variability on labor market outcomes. Section 3 outlines a simple theoretical framework for the paper and section 4 discusses the data and variables constructed. In section 5 we estimate the impact of rainfall shocks on agricultural yields and in section 6 discuss the empirical



strategy and the main findings. Section 7 provides a few robustness checks for the main findings and in section 8 we discuss the mechanisms which could possibly lead to the results obtained.

Effect of weather shocks on labor market outcomes

Weather shocks can have an impact on a variety of outcomes—education, health, time-use, income and migration. And this impact is unlikely to be gender-neutral has been well recognized in literature but is still a black-hole in terms of empirical evidence to substantiate the claims. Out of all the possible effects on women, perhaps the least researched is the impact on labor markets for men and women in the rural areas due to these variations. This can manifest itself through wages, income, time use and migration possibilities which have repercussions on labor market outcome. The literature on weather shocks and labor market outcomes can be broadly divided into two strands. One, which looks into the effect of rainfall shocks on wages and the second, which looks into the effect of such shocks on time use in different activities by agricultural households as a means to cope with the shock.

Solution:

Implementation of MGNREGs will increase the socio-economic profile. It was studied in terms of age, gender, caste, religion, educational level, occupation and economic status etc., and it is described below.

Socio-economic Profile of Sample Beneficiaries Age Composition

The age-wise distribution of the sample population showed that the majority (75%) of the MGNREGS workers belonged to the age group of 30-50 years. The aged population (50-70 years) constituted 17 per cent and the young population (20-30 years) formed mere 8 per cent of the sample population. The age group of 50-70 years was formed to capture the special situation; the majority of workers works in the plantations and retires after the age of 50 years.

Gender

The gender-wise distribution of sample population showed a very high percentage of female population (95%) among the MGNREGS workers. It depicted the commendable role played by MGNREGS in the economic empowerment of rural women.



Religion

The religion-wise distribution of sample population showed that nearly 50 per cent of the MGNREGS workers were Hindus, 42 per cent were Christians and 8 per cent were Muslims. On comparing it with the district-wise distribution, it was observed Thadathil and Mohandas: Impact of MGNREGS on Labour Supply to Agricultural Sector, that the participation of the Muslim community in the MGNREGS was very low. While Muslims formed 27 per cent of the total district population, they were only 8 per cent in MGNREGS workers. On the other hand, Christians, who were only 23 per cent of the total district population, constituted 42 per cent of MGNREGS workers. This shows a higher work participation of the Christian community, especially Christian women in the MGNREGS. Whereas the Muslim community, especially the Muslim women were not attracted towards MGNREGS.

Caste

The caste-wise distribution among the MGNREGS workers showed that 54 per cent belonged to the General Category, 32.5 per cent belonged to Other Backward Castes (OBCs) and 13.5 per cent belonged to the Scheduled Caste (SC) and Scheduled Tribe (ST) category.

Educational Status

The education-wise study of MGNREGS workers revealed a high literacy rate of 91.5 per cent. It was astonishing to find that a majority of them had studied up to high school (40.5%), followed by middle school (25%) and primary level (20.5%). About 5.5 per cent of the workers had studied up to higher secondary level also.

Economic Status

The economic status-wise analysis showed that 59 per cent of the workers belonged to the 'Above Poverty Line' category, while 41 per cent belonged to 'Below Poverty Line' category. The economic status given in the ration card of the workers was taken into consideration for this analysis. The higher participation of APL population indicates that the benefits of the scheme were not really reaching the targeted group, viz. the rural BPL population.

Impacts of MGNREGS

Wage Hike

It was found that MGNREGS had a major impact on the agriculture at the time of its introduction in 2006. In earlier the wages of the agricultural



workers were low; `Rs.100/day for a male worker and Rs.70/day for a female worker, as revealed by the respondents. So when the scheme was introduced, there was a massive flow of agricultural labourers towards the MGNREGS because of a higher wage rate of Rs.125 provided by it. But later when the market wages of the workers increased, the male workers shifted back to their earlier occupations. It was corroborated by the low number of males in the sample population (5%) presently. Thus, MGNREGS is responsible in a way for the wage hike in the agricultural labour market. The wage rate fixed by the MGNREGS is considered as a standard minimum wage below which the market wages cannot go because any such reduction would again lead to transfer of labour from the agricultural sector to the MGNREGS. The hike in wage rates from 2006 to 2011 in the market and under MGNREGS for both male and female workers is depicted.

Economic Empowerment

The implementation of MGNREGS has provided economic empowerment to rural women because it offers same wage rates to male and female workers. Hence, there is a high incidence of female work participation in the MGNREGS because they get a wage equivalent to the market wage and find it more comfortable because it involves less toil. Another attraction for the female workers is that MGNREGS provides 100 days of guaranteed work, which the female workers are not sure of getting on working elsewhere. Some of the female respondents opined that working in a government scheme was more respectful than working as an ordinary labourer

Blessing to Illiterate and Aged Males

It was interesting to find why inspite of higher wage rates in the market, there was still male participation in MGNREGS. It was more relevant because the majority of agricultural labourers in plantations and are not preferred in the labour market on crossing the age of 50 years. Also, there is incidence of illiteracy. The participation of male workers in MGNREGS, though small (5%) was analysed on the basis of the age group and educational level. It was found that 50 per cent of the sample male population was in the age bracket of 50-70 years and the young workers (20-30 years) were only 10 per cent. The education-wise distribution of the sample male population showed that 20 per cent were illiterates and 80 per cent had education only up to middle level. Thus, MGNREGS has been a blessing for these aged and illiterate/low-educated male workers whose demand in the labour market was negligible. Also, these workers were not



willing/able to undertake hard labour but could be absorbed in MGNREGS due to soft work.

Conclusion:

Introduction of the scheme saw a massive movement of labour from the agricultural sector to the MGNREGS because of its higher wages. But at the time of the study, the situation was different. Agricultural sector has been on a recovering path and there existed a high market wage for labourers, higher than the MGNREGS wages. This higher market wage has resulted in a reverse movement of workers back to their basic occupations. Among the workers of MGNREGS, those who had left agriculture and joined MGNREGS formed a very small number and even among that group, a considerable number of workers was of higher age group — those who had retired from plantations and sought a work of lesser toil. It has also been revealed that the majority of the workers in MGNREGS are women, because women get a wage equivalent to a male worker. Not only that, they consider it as a matter of status to be a government worker rather than a mere labourer. So women who were mainly housewives and labourers of higher age group resorted to MGNREGS as it involves less toil and provides guaranteed employment. MGNREGS has contributed substantially towards the economic empowerment of rural women. With these merits, the MGNREGS also has some problems that need addressal. MGNREGS has a role in the hike of market wage of the labourers. The wage rate fixed by the MGNREGS acts as a standard minimum wage below which the market wages cannot go because any such reduction would again lead to transfer of labour from the agricultural sector to the MGNREGS. These are also reports about mismanagement in the MGNREGS which needs immediate attention.

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