



Evaluation of world's largest social welfare scheme: An assessment using non-parametric approach



Sanjeet Singh

Operations Management Group, Indian Institute of Management Calcutta, Diamond Harbour Road, Joka, Kolkata, India

ARTICLE INFO

Article history:

Received 11 June 2015

Received in revised form 17 November 2015

Accepted 18 January 2016

Available online 20 April 2016

Keywords:

DEA

Efficiency analysis

Evaluation

Linear programming

Performance measurement

Social welfare

ABSTRACT

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is the world's largest social welfare scheme in India for the poverty alleviation through rural employment generation. This paper aims to evaluate and rank the performance of the states in India under MGNREGA scheme. A non-parametric approach, Data Envelopment Analysis (DEA) is used to calculate the overall technical, pure technical, and scale efficiencies of states in India. The sample data is drawn from the annual official reports published by the Ministry of Rural Development, Government of India. Based on three selected input parameters (expenditure indicators) and five output parameters (employment generation indicators), I apply both input and output oriented DEA models to estimate how well the states utilize their resources and generate outputs during the financial year 2013–14. The relative performance evaluation has been made under the assumption of constant returns and also under variable returns to scale to assess the impact of scale on performance. The results indicate that the main source of inefficiency is both technical and managerial practices adopted. 11 states are overall technically efficient and operate at the optimum scale whereas 18 states are pure technical or managerially efficient. It has been found that for some states it necessary to alter scheme size to perform at par with the best performing states. For inefficient states optimal input and output targets along with the resource savings and output gains are calculated. Analysis shows that if all inefficient states operate at optimal input and output levels, on an average 17.89% of total expenditure and a total amount of \$780million could have been saved in a single year. Most of the inefficient states perform poorly when it comes to the participation of women and disadvantaged sections (SC&ST) in the scheme. In order to catch up with the performance of best performing states, inefficient states on an average need to enhance women participation by 133%. In addition, the states are also ranked using the cross efficiency approach and results are analyzed. State of Tamil Nadu occupies the top position followed by Puducherry, Punjab, and Rajasthan in the ranking list. To the best of my knowledge, this is the first pan-India level study to evaluate and rank the performance of MGNREGA scheme quantitatively and so comprehensively.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction and motivation

India is the second most populous country in the world after China with its 1.25 billion populations. This large population is spread over 29 states, seven union territories (UT) and 673 districts where approximately 69% of the people live in rural areas ([Census of India, 2011](#)). A vast majority of the people living in rural areas are dependent on agriculture and related work for their livelihood. Since share of agriculture and allied sectors in Gross Domestic Product (GDP) continues to decline over last few decades and currently stands at 14%, therefore, employment generation in rural

areas on a continuous basis has emerged as one of the most crucial socio-economic issues in India in recent years. Also as a signatory to the United Nations Millennium Development Goals (MDG), unarguably, rural employment is a major concern for the Government of India (GOI) and its policy makers. In this context, poverty alleviation in rural areas through employment generation will help to meet the first millennium development goal (MDG, 2000) of reducing by half the proportion of the people living less than a dollar a day by 2015.

In response to the growing poverty and unemployment in rural areas, the Indian parliament enacted the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on 7th September 2005 for the enhancement of livelihood security of the households in rural areas of the country by providing at least one

E-mail address: sanjeet@iimcal.ac.in (S. Singh).

hundred days of guaranteed wage employment (NREGA, 2005) in every financial year to every household. Subsequent to passing the act, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme was launched in 200 selected districts in India in 2006–07 and it was extended to additional 130 districts during 2007–08. All the remaining rural areas of the country were covered w.e.f. April 2008. MGNREGA is the largest law backed social welfare scheme in the world for employment generation. In a study on empowering lives through MGNREGA, United Nations Development Program (UNDP) rightly mentioned (UNDP, 2011) that

“Six years since its inception, this law has shown extraordinary promise. It has brought the ‘right to work’ to the front stage of the discussion on social protection MGNREGA represents a significant innovation in relation to the short-term and emergency based public works tradition.”

Ministry of Rural Development, GOI, is the nodal agency for the implementation of the scheme. MGNREGA scheme has completed nine years of implementation during which it has extended to all 673 district. MGNREGA guarantees a minimum of 100 days of employment to every rural household whose adult members are willing to unskilled manual work at statutory minimum wage rate fixed by the respective state/union territory (UT) governments. In addition to providing guaranteed wage employment to all rural household, MGNREGA also aims to provide sustainable rural livelihood through regeneration of natural resource base, i.e., augmenting productivity and creation of durable physical assets such as rural connectivity to provide all weather access roads, flood control and protection works, drought proofing, water conservation and water harvesting, etc. The unskilled works allowed under this scheme aim to address the causes of chronic rural poverty like deforestation, drought, and soil erosion so that the employment generation is sustainable. The women workforce participation under the scheme has already crossed the statutory minimum requirement of 33% and the data suggests an increase in trend at the national level. Since the launch of the scheme women participation has been around 48% (NREGA at a Glance, 2015).

The MGNREGA scheme is a centrally sponsored scheme on a cost sharing basis between the GOI and the respective state Governments. The GOI bears all costs except the 25% of the cost of material and wages (NREGA, 2005) for semi-skilled/skilled workers, unemployment allowance, and administrative expenses which are to be borne by the state Government. Since its inception in 2006, GOI has so far allotted a total amount of \$46bn (approx.) and the scheme has generated 18.64 billion person-days¹ of employment covering an average 50 million households every year (NREGA at a Glance, 2015). The MGNREGA is the most ambitious and largest social welfare scheme in the world for the rural employment generation. Although the scheme has produced satisfactory results, there are issues related to its performance across various states of the country in generating rural employment, increasing wage earnings, women participation, enhancing productivity and promoting equity, and also differences in spending the allocated money by the states. Comptroller and Auditor General (CAG), supreme constitutional auditor of India, in its performance audit reports (CAG, 2013) of the scheme raised some serious concerns such as lack of public awareness, mismanagement, and institutional incapacity related to the efficient and effective implementation of the scheme. GOI is committed to address these problems regarding the efficiency and resource utilization raised in various performance audit reports.

Since the extension of MGNREGA scheme in 2008 to the entire country, its performance has varied significantly across states. Till

date, a very little attention has been paid to the quantitative and systematic overall state level performance evaluation and ranking, nor has any attempt been made to examine the quantitative impact of resource utilization on the performance of states. In this paper, I evaluate and rank the relative performance of various states across India under MGNREGA scheme using a non-parametric approach of Data Envelopment Analysis (DEA).

There are four main contributions of this paper. First, DEA is used to evaluate and rank the performance of 31 states (28 states and three UTs) under world’s largest social welfare scheme for poverty alleviation in rural areas of India. To the best of my knowledge, this research is the first attempt to evaluate and rank the overall performance of MGNREGA scheme quantitatively at pan India level. Second, efficiency variation and its causes have been analyzed for the inefficient states. Optimal input and output targets have been fixed for inefficient states to improve their performance in future. Optimal input and output targets help to calculate the amount of resource savings and output augmentations for the poorly performing states. Third, my study found that priority groups (women, Scheduled Castes (SC) and Scheduled Tribes (ST)) participation in the scheme is relatively very low for the inefficient states, therefore, this work will help the states to take affirmative actions to increase priority groups participation in the scheme where it is needed the most. Last, but not the least, this research provides important practical implications for planners and policy makers in governments by emphasizing the relevance for states to determine their efficiency so as to avoid ineffective over expenditure or sub-optimal employment generation.

The remainder of the paper is organized as follows: Section 2 reviews the related literature. Non-parametric methodology of DEA and related efficiency concepts have been introduced in Section 3. Section 4 describes data and selection of input and output parameters. Section 5 presents results and discussion of the study. Finally, conclusions are given in Section 6.

2. Literature review

In the recent past, researchers and experts have done both qualitative and quantitative studies to evaluate the performance of MGNREGA scheme. De (2009) investigated the status of MGNREGA in major rural districts of West Bengal. The study found variations in the performance of the districts based on some important indicators like the average person-days generated per households, the proportion of works completed to works taken up, and proportion of total fund spent. Jha, Gaiha, and Shankar (2010) presented the results of the participation of rural workers in MGNREGA through a pilot survey based research in three districts of rural Andhra Pradesh, India. They compared the results of this study with those of their earlier study (Jha, Gaiha, & Shankar, 2008) on Rajasthan and found that Andhra Pradesh performed better than Rajasthan in terms of targeting social and economic weaker sections of the society and landless households. Zaman (2011) assessed the impact of employment generation program on rural poverty reduction through the comparative analysis of rural employment generation schemes in India and Bangladesh. Rengasamy and Kumar (2011) analyzed the state-wise performance of MGNREGA and its impact on various streams of agriculture and agriculture wages. In a policy paper, Dutta, Murgai, Ravallion, and Dominique (2012) analyzed guaranteed employment aspect of MGNREGA. They found that there were several different ways by which MGNREGA impacted the poverty. MGNREGA Sameeksha (Shah, 2012), an anthology of major research studies done on MGNREGA, was published in 2012. Based on the available sources, Reddy, Reddy, and Bantilan (2014) reviewed the impact of MGNREGA on rural labor markets and agriculture. Maiorano (2014) investigated the impact of political

¹ Person-day is defined as one day of work.

Download English Version:

<https://daneshyari.com/en/article/319393>

Download Persian Version:

<https://daneshyari.com/article/319393>

[Daneshyari.com](https://daneshyari.com)